

CITY OF TIGARD, OREGON

RESOLUTION NO. 06-09

A RESOLUTION AND FINAL ORDER APPROVING THE ASH CREEK ESTATES SUBDIVISION (SUBDIVISION (SUB) 2003-00010/PLANNED DEVELOPMENT REVIEW (PDR) 2003-00004/ZONE CHANGE (ZON) 2003-00003/SENSITIVE LANDS REVIEW (SLR) 2003-00005/ADJUSTMENT (VAR) 2003-00036/ADJUSTMENT (VAR) 2003-00037) – ON REMAND FROM LUBA; AND ADOPTING FINDINGS AND IMPOSING CONDITIONS.

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WHEREAS, the Planning Commission initially reviewed this case at a public hearing at its meeting on July 7, 2003; and

WHEREAS, the Planning Commission made motions to both deny and approve the application, both of which failed in a 4-4 tie vote; and

WHEREAS, the by-laws of the Planning Commission and Robert's Rules of Order specify that if an affirmative vote in favor of an application is not attained, the application is denied. Since the denial occurred de facto, no findings were adopted, and the denial is without prejudice; and

WHEREAS, the City Council held a public hearing on the appeal of the denial on August 12, 2003 and September 9, 2003; and

WHEREAS, the City Council adopted findings and conditions of approval that were prepared by the applicant, Winwood Construction, on October 28, 2003 by Resolution 03-58; and

WHEREAS, the Resolution contained an erroneous date reference and was corrected by adopting the amended Resolution 03-61 on November 4, 2003; and

WHEREAS, the City Council's decision was appealed to the State Land Use Board of Appeals (LUBA) on November 25, 2003 based on 25 alleged errors and sub errors in the decision; and

WHEREAS, LUBA concluded in their Final Opinion and Order (LUBA No. 2003-194) on August 20, 2004 that 21 of those assignments of error were denied, but remanded the decisions back to the city on four issues; and

WHEREAS, the City Council on February 22, 2005, after a duly noticed hearing approved the revised application on remand; and

WHEREAS, the City's February 22, 2005 decision was appealed to LUBA, which remanded the decision on the very narrow issue whether CDC 18.350.100.B.3a(1) had been complied with as to those trees that were protected in the tree plan originally approved but not protected in the tree plan submitted on the first remand; and

WHEREAS, applicant has submitted a second revised tree plan that designates those 23 trees for protection but is otherwise the same as the revised tree plan;

NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: The Tigard City Council approves applications SUB2003-00010/PDR2003-00004/ZON2003-00003/SLR2003-00005/VAR2003-00036/VAR2003-00037 – Ash Creek Estates Subdivision – subject to the conditions of approval stated in the staff's January 25, 2005 report to Council, attached hereto as **Exhibit A** and incorporated herein by this reference and the additional condition (Condition 59) stated in Section 3 of this resolution. The Council adopts the findings stated in the January 25, 2005, staff report, and the additional finding stated in Section 2.

SECTION 2: The Council adopts the following additional finding:

CDC 18.350.100B.3.a(1) requires that in planned developments:

- (1) The streets, buildings and other site elements shall be designed and located to preserve the existing trees, topography and natural drainage to the greatest degree possible;

LUBA has remanded this matter on the narrow issue whether this standard has been met, given that the original tree plan showed that trees would be protected within certain areas and the revised tree plan showed that 23 trees would be removed within the area designated for protection in the original tree plan. The applicant has submitted a second revised tree plan, dated September 22, 2005, that protects all 23 trees that were the basis for the LUBA remand. The second revised tree plan is otherwise identical to the revised tree plan submitted after the first remand. LUBA explicitly stated that the remand issue was limited to consideration of those 23 trees.

The Council finds that because the 23 trees at issue will be protected, the standard of CDC 18.350.100B.3.a(1) is met. The site elements have been designed and located to preserve existing trees to the greatest extent possible.

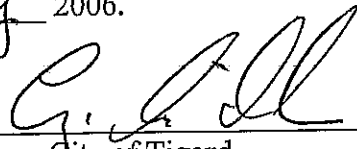
SECTION 3: The Council imposes the following additional condition of approval (Condition 59):

Applicant shall comply with and implement the second revised tree plan (dated September 22, 2005). Applicant shall protect trees designated for preservation in the second revised tree plan as provided in Conditions 55 through 58 (**Exhibit A**).

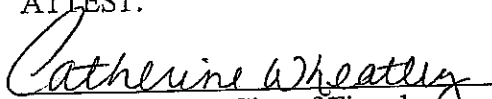
SECTION 4: The Tigard City Council incorporates resolutions 03-61 and 03-58 along with the related findings attached hereto as **Exhibit B** and **Exhibit C** respectively and incorporated herein by this reference to the extent that the findings contained therein do not conflict with the findings adopted in Sections 1 and 2.

SECTION 5: This resolution is effective when notice of the decision is mailed.

PASSED: This 28<sup>th</sup> day of February 2006.

  
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Mayor, City of Tigard

ATTEST:

  
\_\_\_\_\_  
City Recorder – City of Tigard

Agenda Item:

Hearing Date:

February 8, 2005

Time: 7:30 PM

**STAFF REPORT TO THE  
CITY COUNCIL  
FOR THE CITY OF TIGARD, OREGON**



90 DAY REMAND PERIOD = 3/13/2005

**SECTION I. APPLICATION SUMMARY**

<b>FILE NAME:</b>	<b>REMAND of ASH CREEK ESTATES SUBDIVISION</b>	
<b>LUBA FILE NO:</b>	<b>2003-194</b>	
<b>CITY CASE NO'S:</b>	<b>Subdivision (SUB)</b>	<b>SUB2003-00010</b>
	Zone Change (ZON)	ZON2003-00003
	Planned Development Review (PDR)	PDR2003-00004
	Sensitive Lands Review (SLR)	SLR2003-00005
	Adjustment (VAR)	VAR2003-00036
	Adjustment (VAR)	VAR2003-00037

**APPLICANT:** Dale Richards  
Winwood Construction  
12655 SW North Dakota Street  
Tigard, OR 97223

**PROJECT CONTACT:** Kurahashi and Associates  
Attn: Greg Kurahashi  
15580 SW Jay, Suite 200  
Beaverton, OR 97006

**OWNER:** Ernest E. and Elda H. Senn  
9750 SW 74<sup>th</sup> Avenue  
Tigard, OR 97223

**REQUEST:** The State Land Use Board of Appeals (LUBA) has remanded City Council's approval of a 29-lot planned development on 9.3 acres and associated sensitive lands and adjustment reviews for additional findings to support their decision. This hearing is limited to the four specific assignments of error which are generally:

- 1) the City's acceptance of lower "K" values in relation to the proposed vertical sag curve on SW 74<sup>th</sup> and demonstration that the City Engineer is authorized to approve such deviations to adopted street standards,
- 2) the requirement that the applicant prepare and submit a tree plan that identifies the size, species, and location of trees on the site, provides a removal plan, protection plan, and mitigation program in accordance with TCDC 18.790,
- 3) revised findings are required for the proposed curb tight sidewalks on SW 74<sup>th</sup> to address the relevant criteria of TCDC 18.370.C.11., and
- 4) additional findings related to the landscape protection criteria of TCDC 18.745.030.E.

**ZONING**

**DESIGNATION:** R-4.5: Low-Density Residential District.

**LOCATION:** 9750 SW 74<sup>th</sup> Avenue; WCTM 1S125DC, Tax Lots 300 and 400.



**APPLICABLE  
REVIEW  
CRITERIA:**

Community Development Code Chapters 18.370, 18.790, and 18.810

**SECTION II. STAFF RECOMMENDATION**

Staff recommends that the City Council accept and adopt the additional findings presented in the applicant's submittal, as further elaborated on within this report and find that the proposed Planned Development and street adjustments will not adversely affect the health, safety and welfare of the City and meets the Approval Criteria outlined in this report. Therefore, Staff recommends **APPROVAL**, subject to the Conditions of Approval and Findings adopted previously as Resolution 03-61 and further refined, and amended within this report:

**CONDITIONS OF APPROVAL**

(Note, conditions #1-51 are from the original decision and are included for reference only)

**THE FOLLOWING CONDITIONS SHALL BE SATISFIED PRIOR TO COMMENCING ANY ONSITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES:**

Submit to the Planning Department (Morgan Tracy, 639-4171, ext. 2428) for review and approval:

1. Prior to site work, the applicant shall submit an arborist report with tree protection recommendations, and shall provide the City Arborist with a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving.
2. Prior to site work, the applicant shall submit a complete set of construction documents with the tree locations for the City Arborists review. The applicant will not cut any healthy trees within the designated open space tract. Furthermore, the applicant shall not cut any healthy trees in the tree preservation areas of Lots 1-18, which shall be defined as the area at least 15' from the rear of the building footprints. However, if an arborist determines that trees in these areas are dead, diseased, or pose a safety hazard, then the applicant shall remove affected trees from those areas.
3. Prior to site work, the applicant shall notify the City Arborist at least 48 hours prior to commencing construction when the tree protection measures are in place so that he may verify that the measures will function properly.
4. Prior to site work, the applicant shall provide evidence of all necessary approvals for work within the wetlands from US Army Corps of Engineers and the Division of State Lands.
5. Prior to site work, the drainage tract must be clearly identified in the field with permanent (preferably with minimum 4-foot-tall black chainlink) fencing so as to insure no grading or material is placed in this area. Any fencing that is damaged during construction must be replaced prior to final building inspection. If the damage is such that it will no longer effectively identify the tract, it shall be replaced/reinstalled immediately.
6. Prior to site work, a signed approval shall be included with the City's construction drawing packet.

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

7. Prior to approval of construction plans, the applicant shall "pothole" the City of Tualatin's main water transmission line to determine the exact location and condition of the pipe. The applicant shall notify the City of Tigard and the City of Tualatin 48 hours prior to the pothole inspections and when any construction activity will impact the pipe (such as placement of fill and excavation in the immediate vicinity) so that a representative from both the Cities of Tualatin and Tigard can be present.
8. Prior to commencing onsite improvements, a Public Facility Improvement (PFI) permit is required for this project to cover all infrastructure and any other work in the public right-of-way. Eight (8) sets of detailed public improvement plans shall be submitted for review to the Engineering Department. NOTE: these plans are in addition to any other drawings required by the Building Division and should only include sheets relevant to public improvements. Public Facility Improvement (PFI) permit plans shall conform to City of Tigard Public Improvement Design Standards, which are available at City Hall and the City's web page ([www.ci.tigard.or.us](http://www.ci.tigard.or.us)).
9. The PFI permit plan submittal shall include the exact legal name, address and telephone number of the individual or corporate entity who will be designated as the "Permittee", and who will provide the financial assurance for the public improvements. For example, specify if the entity is incorporated and provide the name of the corporate contact person. Failure to provide accurate information to the Engineering Department will delay processing of project documents.
10. The applicant shall provide a construction vehicle access and parking plan for approval by the City Engineer. The purpose of this plan is for parking and traffic control during the public improvement construction phase. All construction vehicle parking shall be provided on-site. No construction vehicles or equipment will be permitted to park on the adjoining residential public streets. Construction vehicles include the vehicles of any contractor or subcontractor involved in the construction of site improvements or buildings proposed by this application, and shall include the vehicles of all suppliers and employees associates with the project.
11. The applicant shall submit construction plans to the Engineering Department as a part of the Public Facility Improvement permit, which indicate that they will construct a half-street improvement along the frontage of 74<sup>th</sup> Avenue. The improvements adjacent to this site shall include:
  - A. City standard pavement section for a neighborhood route, without bike lanes, from curb to centerline equal to 16 feet, with a minimum pavement width of 24 feet;
  - B. Pavement tapers needed to tie the new improvement back into the existing edge of pavement shall be built beyond the site frontage;
  - C. Concrete curb, or curb and gutter as needed;
  - D. Storm drainage, including any off-site storm drainage necessary to convey surface and/or subsurface runoff;
  - E. 5-foot concrete sidewalk with a planter strip (unless adjusted);
  - F. Street trees in the planter strip spaced per TDC requirements;
  - G. Street striping;

- H. Streetlight layout by applicant's engineer, to be approved by City Engineer;
  - I. Underground utilities;
  - J. Street signs (if applicable);
  - K. Driveway apron (if applicable);
  - L. Adjustments in vertical and /or horizontal alignment to construct SW 74<sup>th</sup> Avenue in a safe manner, as approved by the Engineering Department, including reductions to the speed limit as necessary; and
  - M. Right-of-way dedication to provide 27 feet from centerline.
12. The applicant's Public Facility Improvement permit construction drawings shall indicate that full width street improvements, including traffic control devices, mailbox clusters, concrete sidewalks, driveway aprons, curbs, asphaltic concrete pavement, sanitary sewers, storm drainage, street trees, streetlights, and underground utilities shall be installed within the interior subdivision streets. Improvements shall be designed and constructed to local street standards.
13. A profile of 74<sup>th</sup> Avenue shall be required, extending 300 feet either side of the subject site showing the existing grade and proposed future grade.
14. The applicant's construction drawings shall show that the pavement and rock section for the proposed private street(s) shall meet the City's public street standard for a local residential street.
15. The applicant shall obtain approval from the Tualatin Valley Water District for the proposed water connection prior to issuance of the City's Public Facility improvement permit.
16. Final design plans and calculations for the proposed public water quality/detention facility shall be submitted to the Engineering Department (Kim McMillan) as a part of the Public Facility Improvement plans. Included with the plans shall be a proposed landscape plan to be approved by the City Engineer. The proposed facility shall be dedicated in a tract to the City of Tigard on the final plat. As a part of the improvement plans submittal, the applicant shall submit an Operations and Maintenance Manual for the proposed facility for approval by the Maintenance Services Director. The facility shall be maintained by the developer for a three-year period from the conditional acceptance of the public improvements. A written evaluation of the operation and maintenance shall be submitted and approved prior to acceptance for maintenance by the City. Once the three-year maintenance period is completed, the City will inspect the facility and make note of any problems that have arisen and require them to be resolved before the City will take over maintenance of the facility. In addition, the City will not take over maintenance of the facility unless 80 percent of the landscaping is established and healthy. If at any time during the maintenance period, the landscaping falls below the 80 percent level, the developer shall immediately reinstall all deficient planting at the next appropriate planting opportunity.
17. An erosion control plan shall be provided as part of the Public Facility Improvement (PFI) permit drawings. The plan shall conform to the "Erosion Prevention and Sediment Control Design and Planning Manual, December 2000 edition."
18. A final grading plan shall be submitted showing the existing and proposed contours. The plan shall detail the provisions for surface drainage of all lots, and show that they will be graded to ensure the surface drainage is directed to the street or a public storm drainage system

approved by the Engineering Department. For situations where the back portions of lots drain away from a street and toward adjacent lots, appropriate private storm drainage lines shall be provided to sufficiently contain and convey runoff from each lot.

19. The applicant shall incorporate the recommendations from the submitted geotechnical report by GeoPacific Engineering, Inc., dated May 9, 2003, into the final grading plan. The applicant shall have the geotechnical engineer ensure that all grading, including cuts and fills, are constructed in accordance with the approved plan and Appendix Chapter 33 of the UBC. A final construction supervision report shall be filed with the Engineering Department prior to issuance of building permits.
20. The design engineer shall indicate, on the grading plan, which lots will have natural slopes between 10% and 20%, as well as lots that will have natural slopes in excess of 20%. This information will be necessary in determining if special grading inspections and/of permits will be necessary when the lots develop.
21. The final construction plans shall be signed by the geotechnical engineer to ensure that they have reviewed and approved the plans. The geotechnical engineer shall also sign the as-built grading plan at the end of the project.
22. The applicant shall obtain a 1200-C General Permit issued by the City of Tigard pursuant to ORS 468.740 and the Federal Clean Water Act.

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**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO APPROVAL OF THE FINAL PLAT:**

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**Submit to the Planning Department (Morgan Tracy, 639-4171, ext 2428) for review and approval:**

23. Prior to approval of the final plat, the applicant shall revise the plat to accommodate a minimum of 25 feet of frontage for all lots within the development.
24. Submit a revised street tree/landscape plan that shows an alternative tree species used for the public street to vary the streetscape.
25. The applicant shall provide joint access within an easement or tract to Lots 28 and 29 and cause a statement to be placed on the plat limiting additional direct vehicular access to SW 74<sup>th</sup> Avenue.
26. Provide a plat name reservation approval from Washington County.
27. Prior to final subdivision plat approval, the applicant shall convey title for the proposed open space to a homeowner's association in accordance with the requirements of Section 18.350.110.A.2.b of the Tigard Development Code.

**Submit to the Engineering Department (Kim McMillan), 639-4171, ext. 2642) for review and approval:**

28. Prior to approval of the final plat the applicant shall obtain a plumbing permit for the construction of the private storm line in the private street.

29. Prior to approval of the final plat, the applicant shall pay an addressing fee in the amount of \$900.00 (Staff Contact: Shirley Treat, Engineering).
30. Prior to approval of the final plat, the applicant shall cause a statement to be placed on the final plat to indicate that the proposed private street(s) will be jointly owned and maintained by the private property owners who abut and take access from it (them).
31. Prior to approval of the final plat, the applicant shall prepare Conditions, Covenants and Restrictions (CC&R's) for this project, to be recorded with the final plat, that clearly lays out a maintenance plan and agreement for the proposed private street(s). The CC&R's shall obligate the private property owners within the subdivision to create a homeowner's association to ensure regulation of maintenance for the street(s). The CC&R's shall additionally establish restrictions regarding the removal of trees greater than 12 inches in diameter from any of the lots or tracts following completion of the subdivision improvements. Trees may only be allowed to be removed subject to a certified arborist's finding that the trees are dead, or in severe decline. The applicant shall submit a copy of the CC&R's to the Engineering Department (Kim McMillan) and the Planning Department (Morgan Tracy) prior to approval of the final plat.
32. Prior to approval of the final plat, the applicant shall demonstrate that they have formed and incorporated a homeowner's association.
33. Prior to approval of the final plat, the applicant shall either place the existing overhead utility lines along SW 74<sup>th</sup> Avenue underground as a part of this project, or they shall pay the fee in-lieu of under grounding. The fee shall be calculated by the frontage of the site that is parallel to the utility lines and will be \$27.50 per lineal foot. If the fee option is chosen, the amount will be \$11,578.00 and it shall be paid prior to final plat approval.
34. Prior to approval of the final plat, the applicant shall provide a maintenance access road to the facility and any drainage structures within the facility to accommodate City maintenance vehicles. The access road shall be paved and have a structural section capable of accommodating a 50,000-pound vehicle. The paved width shall be a minimum of 10 feet wide, and there shall be two-foot rock shoulders provided on each side. If the maintenance roadway is over 150 feet in length, a turnaround shall be provided.
35. The applicant's final plat shall contain State Plane Coordinates on two monuments with a tie to the City's global positioning system (GPS) geodetic control network (GC 22). These monuments shall be on the same line and shall be of the same precision as required for the subdivision plat boundary. Along with the coordinates, the plat shall contain the scale factor to convert ground measurements to grid measurements and the angle from north to grid north. These coordinates can be established by:
- GPS tie networked to the City's GPS survey.
  - By random traverse using conventional surveying methods.
36. Final Plat Application Submission Requirements:
- A. Submit for City review four (4) paper copies of the final plat prepared by a land surveyor licensed to practice in Oregon, and necessary data or narrative.

- B. Attach a check in the amount of the current final plat review fee (Contact Planning/Engineering Permit Technicians, at (503) 639-4171, ext. 426).
- C. The final plat and date or narrative shall be drawn to the minimum standards set forth by the Oregon Revised Statutes (ORS 92.05), Washington County, and by the City of Tigard.
- D. The right-of-way dedication for 74<sup>th</sup> Avenue shall be made on the final plat.
- E. Note: Washington County will not begin their review of the final plat until they receive notice from the Engineering Department indicating that the City has reviewed the final plat and submitted comments to the applicant's surveyor.
- F. After the City and County have reviewed the final plat, submit two mylar copies of the final plat for City Engineer signature (for partitions), or City Engineer and Community Development Director signatures (for subdivisions).

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**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO ISSUANCE OF BUILDING PERMITS:**

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**Submit to the Planning Department (Morgan Tracy, 639-4171, ext. 2428) for review and approval:**

- 37. Prior to issuance of any building permits, re-plant any area where vegetation has been removed as a result of grading in conformance with the Clean Water Services Standards as set forth in the site assessment file #2819, prior to obtaining building permits.
- 38. Prior to issuance of any building permits, the applicant shall submit plans that show one (1) off-street parking space, which meets minimum dimensional requirements and setback requirements as specified in Title 18, provided on-site for each new home.
- 39. At the time of application for building permits for individual homes, the applicant shall demonstrate that each site will be accessed by a minimum 10-foot-wide paved access.
- 40. Prior to the issuance of building permits, the developer shall sign a copy of the City's sign compliance agreement.
- 41. Prior to the issuance of building permits the applicant shall submit a revised plan that indicates the modified setbacks as set forth in this decision and record a copy of the approved setback plan with the deeds for each lot.
- 42. Prior to issuance of building permits for structures on the individual lots within this development, the applicant shall demonstrate compliance with the height requirement of the underlying zone. The requirement calls for 30-foot maximum height for primary units and 15 feet maximum for all accessory structures.
- 43. Prior to the issuance of building permits on any lot, the applicant must provide city staff with a letter from Clean Water Services that indicates compliance with the approved service provider letter (#2819).

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

44. Prior to issuance of building permits the applicant's engineer shall provide a post-construction sight distance certification for the new intersection at 74<sup>th</sup> Avenue.
45. The City Engineer may determine the necessity for, and require submittal and approval of, a construction access and parking plan for the home building phase. If the City Engineer deems such a plan necessary, the applicant shall provide the plan prior to issuance of building permits.
46. Prior to issuance of building permits, the City Engineer shall deem the public improvements substantially complete. Substantial completion shall be when: 1) all utilities are installed and inspected for compliance, including franchise utilities, 2) all local residential street have at least one lift of asphalt, 3) any off-street and/or utility improvements are substantially completed, and 4) all street lights are installed and ready to be energized. Note: The City apart from this condition, and in accordance with the City's model home policy may issue model home permits).
47. Prior to issuance of building permits, the applicant shall provide the City with as-built drawings of the public improvements as follows: 1) 3 mil mylar, 2) a diskette of the as-builts in "DWG" format, if available; otherwise "DXF" will be acceptable, and 3) the as-built drawings shall be tied to the City's GPS network. The applicant's engineer shall provide the City with an electronic file with points for each structure (manholes, catch basins, water valves, hydrants and other water system features) in the development, and their respective X and Y State Plane Coordinates, referenced to NAD 83 (91).
48. Prior to issuance of building permits, the applicant shall provide the Engineering Department with a "photo mylar" copy of the recorded final plat.
49. The applicant shall provide signage at the entrance of each shared flag lot driveway or private street that lists the addresses that are served by the given driveway or street.

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**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO ISSUANCE OF FINAL BUILDING INSPECTION:**

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50. The applicant shall install street trees and an evergreen hedge of Leyland Cypress spaced no greater than three feet on center along the northern property line of Lots 1-10 and the eastern property line of Lots 10-12.

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**ADDITIONAL CONDITIONS OF APPROVAL  
FOR ASH CREEK ESTATES:**

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51. The applicant and future owners of lots within the development shall ensure that the requirements of Tigard Community Development Code (TCDC) 18.725, Environmental Performance Standards, are complied with at all times.

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## ADDITIONAL CONDITIONS IMPOSED THROUGH REMAND FINDINGS AND ANALYSIS

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52. Prior to commencing site work, the applicant shall submit construction drawings that show advisory "15 mph" speed limit signs to be placed in advance of the crest and sag curves on SW 74<sup>th</sup> in accordance with the City Engineer's Memorandum of January 25, 2005, which requires that the sag be monitored after construction to determine if any other measures need to be taken. The applicant shall be responsible for installation of additional measures within a year after construction of the street is accepted by the City if monitoring indicates that additional traffic control measures are needed.
53. Prior to commencing site work, the applicant shall submit a bond for the equivalent value of mitigation required (3,446 number of caliper inches times \$125 per caliper inch). If additional trees are preserved through the subdivision improvements and construction of houses, and are properly protected through these stages by the same measures afforded to other protected trees on site, the amount of the bond may be correspondingly reduced. Any trees planted on the site or off site in accordance with 18.790.060 (D) will be credited against the bond, for two years following final plat approval. After such time, the applicant shall pay the remaining value of the bond as a fee in lieu of planting.
54. Prior to issuance of building permits, the applicant/owner shall record a deed restriction for each lot to the effect that any existing tree greater than 12" diameter may be removed only if the tree dies or is hazardous according to a certified arborist. The deed restriction may be removed or will be considered invalid if a tree preserved in accordance with this decision should either die or be removed as a hazardous tree.
55. Prior to commencing any site work, the applicant shall submit construction drawings that include the approved Tree Removal, Protection and Landscape Plan. The "Tree Protection Steps" identified in Teragan & Associates Letter of November 19, 2004, shall be reiterated in the construction documents. The plans shall also include a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving. Only those trees identified on the approved Tree Removal plan are authorized for removal by this decision.
56. Prior to commencing any site work, the applicant shall establish fencing as directed by the project arborist to protect the trees to be retained. The applicant shall allow access by the City Forester for the purpose of monitoring and inspection of the tree protection to verify that the tree protection measures are performing adequately. Failure to follow the plan, or maintain tree protection fencing in the designated locations shall be grounds for immediate suspension of work on the site until remediation measures and/or civil citations can be processed.
57. Prior to final plat approval, the applicant shall ensure that the Project Arborist has submitted written reports to the City Forester, once every two weeks, from initial tree protection zone (TPZ) fencing installation, through site work, as he monitors the construction activities and progress. These reports should include any changes that occurred to the TPZ as well as the condition and location of the tree protection fencing. If the amount of TPZ was reduced then the Project Arborist shall justify why the fencing was moved, and shall certify that the construction activities to the trees did not adversely impact the overall, and long-term health and stability of the tree(s). If the reports are not submitted or received by the City Forester at the scheduled intervals, and if it appears the TPZ's or the Tree Protection Plan is not being



followed by the contractor, the City shall stop work on the project until an inspection can be done by the City Forester and the Project Arborist. This inspection will be to evaluate the tree protection fencing, determine if the fencing was moved at any point during construction, and determine if any part of the Tree Protection Plan has been violated.

58. Prior to issuance of building permits, the applicant shall submit site plan drawings indicating the location of the trees that were preserved on the lot, location of tree protection fencing, and a signature of approval from the project arborist regarding the placement and construction techniques to be employed in building the house. All proposed protection fencing shall be installed and inspected prior to commencing construction, and shall remain in place through the duration of home building. After approval from the City Forester, the tree protection measures may be removed.

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**THIS APPROVAL SHALL BE VALID FOR 18 MONTHS FROM THE EFFECTIVE DATE OF THE CITY COUNCIL'S FINAL DECISION.**

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### **SECTION III. BACKGROUND INFORMATION**

#### **Application History**

The property is currently developed with one single-family residence and a couple of small outbuildings. On July 7<sup>th</sup>, 2003, the Tigard Planning Commission held a public hearing to consider an application for a 29 lot subdivision and planned development on 9.36 acres. The property is located at 9750 SW 74<sup>th</sup> Avenue. The proposal is to provide single-family detached housing on lots ranging between 4,702 and 11,616 square feet.

The Planning Commission moved to deny the application, which failed in a 4-4 tie vote. The Commission then moved to approve the application, which also failed in a 4-4 tie vote. Based on the Commission's by-laws and Robert's Rules of Order, without a majority affirmative vote, the application is denied. Since no motion was approved, no findings in support or against the application were adopted.

The applicant, Dale Richards of Windwood Homes, filed an appeal of the application denial on July 15, 2003. His stated grounds for the appeal are "That applicant contends that the Planning Commission should have adopted specific grounds for denial. The denial should have been based on the proposed plan not meeting the Development Code. All specific requirements of the code were met. The applicant, therefore, proposes that the project should be approved through the appeal process."

On August 12, 2003, the City Council held a public hearing on the appeal to reconsider the application, de novo. Based on the large numbers of those in attendance wishing to testify, there was insufficient time to receive testimony from all interested parties. Therefore Council continued the public hearing to the September 9<sup>th</sup> Council meeting to complete the public testimony.

At the September 9, 2003 hearing, the applicant offered rebuttal to the points raised by the opponents. After the hearing closed, Council members indicated that they were persuaded the requirements of the Development Code had been met and approved a motion for tentative decision for approval of the application. Council directed the applicant to provide the written findings for this decision for final Council consideration at its October 28, 2003 meeting. The applicant submitted

findings along with modified conditions of approval to support the decision. At the October meeting, Council adopted resolution 03-58 approving the Ash Creek Estates Subdivision.

In that resolution, a reference was made to a letter dated September 26, 2003 from the applicant. That date was erroneous. The letter which established the Conditions of Approval for the project is dated October 10, 2003. The correct letter, and consequently the correct findings and conditions of approval were incorporated in the adopted resolution. Only the reference to the date of the letter in the resolution was in error. As a result, on November 4, 2003, the City Council adopted a resolution (Resolution No. 03-61) correcting the reference.

Within the 21-day appeal period established for appeals to the State Land Use Board of Appeals, John Frewing filed an appeal with LUBA. On August 20, 2004, the Land Use Board of Appeals ("LUBA"), issued a decision to remand the City's decision approving the application. LUBA's decision specified four instances where it found the City's findings insufficient.

#### Vicinity Information:

The site is located in the northwest corner of the City limits, south of SW Taylor's Ferry Road, on the east side of SW 74<sup>th</sup> Avenue. The property is surrounded on all sides by single-family residences on lots that vary in size. There is a stream (Ash Creek) on the property that runs in an east west direction along the southern property boundary. This drainageway contains wetlands and areas of steep slopes.

#### Proposal Information:

The applicant is proposing to subdivide the parcel into 29 lots for single-family residences. Because of the trees, wetlands, and slopes on the site, the applicant has requested a planned development to allow them to vary the underlying zoning standards to develop around these features. The applicant is also requesting an adjustment to allow a curb tight sidewalk as opposed to a sidewalk separated from the travel surface by a planter strip, and an adjustment to the cul-de-sac standards limiting the number of units on a cul-de-sac and the 200-foot maximum length permitted for a cul-de-sac.

## **SECTION IV. DECISION MAKING PROCEDURES, PERMITS AND USE**

### **USE CLASSIFICATION: SECTION 18.130.020**

#### **Lists the Use Categories.**

The applicant is seeking approval of a 29-lot subdivision on 9.3 acres. The lots are to be developed with detached single-family homes. Single family residential development is outright permitted in the R-4.5 zone. The existing single-family home is to be demolished. Lot sizes within the proposed development are between 4,702 and 11,616 square feet and average 6,424 square feet. The applicant is also proposing to set aside approximately 4.15 acres in an open space tract for the drainageway and wetland area. A private street cul-de-sac is also proposed to extend from the public street stub into the property. The site is located within the R-4.5, Low Density Residential District. Planned Developments are permitted in all zoning districts. The applicant has applied for conceptual and detailed planned development approval in conjunction with the subdivision.

### **SUMMARY OF LAND USE PERMITS: CHAPTER 18.310**

#### **Defines the decision-making type to which the land-use application is assigned.**

This is a Planned Development/Subdivision, which is defined as a Type III-PC Application. The Planning Commission decision is appealable to the City Council. The City Council decision is the final

decision at the local level. Appeals of City Council decisions are heard at the State level by the Land Use Board of Appeals (LUBA). LUBA may either affirm, reject, modify, or remand the decision back to the local decision making authority. In this case, LUBA remanded the decision for further consideration.

### **DECISION MAKING PROCEDURES: CHAPTER 18.390**

#### **Describes the decision-making procedures.**

Type III procedures apply to quasi-judicial permits and actions that contain predominantly discretionary approval criteria. Type III-PC actions are decided by the Planning Commission with appeals to the City Council. Type III-HO actions are decided by the Hearings Officer with appeals to City Council. In cases where both the Hearings Officer and Planning Commission are involved, the Planning Commission has preferential jurisdiction, per Tigard Development Code (TDC) Section 18.390.080(D)(2)(a).

## **SECTION VI. APPLICABLE REVIEW CRITERIA AND FINDINGS**

As this case has been remanded from LUBA<sup>1</sup> based on four assignments of error related to insufficient evidence to support the City's conclusions, the applicable review criteria are those related to the specific assignments of error. City Council has previously reviewed this proposed development, and provided findings related to the other relevant portions of the review criteria. Those findings are memorialized by Resolutions 03-58 and 03-61. This review is limited to the criteria and issues that were raised by LUBA. The applicant provided a narrative and additional evidence to respond to the issues outlined in LUBA's remand. The findings contained herein are intended to supplement the City's existing adopted findings where consistent. In the case that the following findings conflict with the original findings, these findings shall govern.

LUBA's opinion on the four assignments of error on which it remanded are reproduced in their entirety in the following sections (distinguished by a different typeface), followed by the applicant's additional findings and Staff's analysis, as applicable.

### **1. ASSIGNMENT OF ERROR 5(B)**

LUBA found that there was inadequate evidence to support the City's position that it has the authority to approve a street design that does not meet the standard design specifications, especially as it relates to the vertical sag curve on SW 74<sup>th</sup> Avenue. The text of their discussion follows:

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#### **B. Vertical Sag Curve**

SW 74<sup>th</sup> Avenue along the western border of the property is currently unimproved. To improve SW 74<sup>th</sup> Avenue along the western border of the property a creek and wetlands near the southwestern corner of the property must be crossed, which will create a vertical sag curve.<sup>2</sup> With increased speed, the vertical sag curve needs to be more level or gentle to allow traffic traveling at the road's design speed to travel across the vertical sag curve safely. With decreased speed, the vertical sag curve can be steeper, or more severe, and still be safely

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<sup>1</sup> ORS 197.835(9) states "In addition to the review under subsections (1) to (8) of this section, the board shall reverse or remand the land use decision under review if the board finds [that] the local government or special district made a decision not supported by substantial evidence in the whole record."

<sup>2</sup> According to respondent, a vertical sag curve is the opposite of the type of curve that must be negotiated to climb and crest a hill and descend the other side of the hillcrest. In traversing a vertical sag curve, one descends to the bottom of the curve and then climbs up the other side of the curve.

traveled. The issue presented in this subassignment of error is whether the city approved construction of SW 74<sup>th</sup> with a vertical sag curve that is too steep. (emphasis added)

TCDC 18.810.020(B) provides that the City Engineer is to establish street construction standards.<sup>3</sup> The parties apparently agree that the City Engineer has done so. Attached to the petition for review, as Appendix B, are two figures that petitioner and the city apparently agree are street construction standards that have been adopted by the City Engineer. The first figure shows a typical road pavement section, which indicates that the design speed for local roads is 25 miles per hour. The second figure shows vertical sag curve "K" values for roads with different design speeds. We do not fully understand that table, but the vertical sag curve "K" values clearly increase with design speed. For example a road with a design speed of 25 miles per hour must have a K value of at least 13.4. For a road with a design speed of 55 miles per hour, a K value of at least 65.1 is required. It appears that the smaller the "K" value the steeper the vertical sag curve. Conversely, the larger the "K" value the more gentle the curve.

Rather than place fill in the area of the creek to decrease the severity of the vertical sag curve to a "K" value of at least 13.4, the county [sic] approved a steeper vertical sag curve with a "K" value of 5.4.<sup>4</sup> To allow the steeper vertical sag curve and maintain safety, the county [sic] reduced the speed limit that would otherwise apply to this part of SW 74<sup>th</sup> Avenue to 15 miles per hour. The county [sic] explained its decision as follows:

"The applicant also requested that the speed limit be reduced to 15 miles per hour in the section where the 74<sup>th</sup> Avenue crossing will occur. This speed limit was accepted by the City of Tigard Engineer. The city of Tigard standards are met by a 15 mile per hour vertical curve design, to a 'K value' of greater than 5 (AASHTO)." Record 43.

It may well be that a road with speed limited to 15 miles per hour with a vertical sag curve with a "K" value of greater than 5 is just as safe as roads with the design speeds shown on the table with vertical sag curves with the "K" value that corresponds to the different design speeds. However, the city's street standards seem to call for roads with a design speed of at least 25 miles per hour. Roads with a design speed of 25 miles per hour may have vertical sag curves with a "K" value of no less than 13.4. While avoiding the fill that will be necessary to achieve a vertical sag curve in this section of SW 74<sup>th</sup> Avenue might make sense from both environmental impact and traffic engineering perspectives, and might result in no compromise in safety if the posted speed limit is reduced to 15 miles per hour, **the city's findings identify no authority for simply deviating from the lowest "K" value that is specified in the city's standards, and reducing the speed on the street to maintain safety.**<sup>5</sup> (Emphasis added). If the City Engineer has retained discretion under the TCDC and any other related city regulations to simply deviate from the table and allow construction of a road with a lower "K" value and impose a speed limit to preserve safety, no party identifies such authority.

The findings simply say the City Engineer has accepted the proposal. Neither the city's findings nor the response brief identify any place in the record that explains the City Engineer's reasoning in support of the lower "K" value or the city's engineer's authority to approve deviations from the adopted "K" values. Without that explanation, we must sustain this subassignment of error.

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## **ADDITIONAL FINDINGS AND ANALYSIS**

SW 74<sup>th</sup> Avenue along the western border of the property is currently unimproved. The City required the applicant to make improvements to S.W. 74 as part of its approval (Conditions 10, 11, 13, 33, 45).

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<sup>3</sup>TCDC 18.810.020(B) provides:

"Standard specifications. The City Engineer shall establish [street and utility] standard specifications consistent with the application of engineering principles."

<sup>4</sup>The findings explain that to achieve a "K" value of 13.4 a great deal of fill would be required in the wetland and that fill would have to be placed on top of an existing water line. The city wished to avoid placing this amount of fill on the water line. Record 84.

<sup>5</sup>Taken to an extreme, if the speed limit were reduced to a crawl, we assume almost any "K" value could be accommodated.

The applicant has accepted these conditions. The applicant notes that due to the topography and the existence of a stream, the improvements to S.W. 74 will result in a fairly steep sag curve and a corresponding crest curve. There are standards that define how steep sag and crest curves can be at various speeds. The steepness of the curves is expressed as a "K" value. For example, at a speed of 25 miles per hour (mph), the typical standards require a vertical sag "K" value of no less than 13.4. In this case, the speed limit on S.W. 74<sup>th</sup> is 25 mph. To achieve a "K" value of 13.4, the applicant would have to place a significant amount of fill in S.W. 74 to make the sag curve shallower and the crest curve lower.

During the hearing process, the applicant provided evidence that significant fill would cause negative impacts to the resources adjacent to S.W. 74<sup>th</sup> and might possibly damage an existing 36-inch diameter water main serving the City of Tualatin that is in the street right of way. Also, in order to be able to maintain this line, the amount of earth over the line must be minimized. By designing the curves to meet the "K" values required for a 25 mile per hour design speed would result in fills greater than 35 feet deep. This would impede normal and emergency maintenance and repairs as well as make a large failure have catastrophic results (i.e. loss of the road and loss of water service to the City of Tualatin).

Also the fills would result in greater impacts to the creek with either larger footings for retaining walls or wider fill slope areas, which would remove a meander in the creek, more wetland area, and additional large trees from the sensitive area.

The applicant's engineer considered using a bridge as opposed to fill. The applicant's engineer concluded that a bridge would result in an unmaintainable water line that could not be repaired or maintained under the bridge deck and the line would be much too expensive to construct and maintain.

Relocating the waterline is not a viable option either since it would interrupt water service to the City of Tualatin. This would also increase the difficulty of maintaining the line as it would be in the waterway as well as have increased impacts to the sensitive resources.

As the applicant had previously presented, allowing for a lower speed limit is the only reasonable solution to the waterline construction and maintenance issue. At 15 mph, Windwood could make the required improvements using only 21.63 ft. of fill. While that means that any repair will still require some excavation, it is 13.27 feet less than what is required if the sag curve is designed at 25 mph, and as a result, much more viable to maintain.

Accordingly, the applicant proposed to lower the speed limit in the area of the sag curve to 15 mph. At that speed the sag curve "K" factor is no less than 5. The applicant could improve S.W.74<sup>th</sup> to meet that standard without significant fill. The City agreed with the applicant's proposal and, in the final findings, stated as follows:

"The applicant also requested that the speed limit be reduced to 15 mph in the section where the S.W. 74 Avenue crossing will occur. This speed limit was accepted by the City of Tigard Engineer. The City of Tigard standards are met by a 15 mph vertical curve design to a "K" value of greater than 5 (AASHTO)."

The City Engineer has provided a memorandum expressly approving the modified design by granting an exception to the standard. This exception is mitigated by the requirement for additional advisory signage and street lighting, as further described in the memo.

Section B (City of Tigard Standard Specifications) reads "The City Engineer shall establish standard specifications consistent with the application of engineering principles" The City's Public Improvement standards are based on AASHTO standards and the standards of Washington County. The preface to the City's design standards states: "The form has been kept brief and no attempt has been made to

cover all possible situations or to provide detailed explanations." In relation to sag curves and crest curves, the Washington County standards, as set forth in tables, include speeds of less than 25 mph and speeds as low as 15 mph. Because the City's published tables are not intended to be comprehensive and because they are based on Washington County standards, the applicant asserts, and the City agrees that the City Engineer has the authority to approve a design based on a 15 mph speed consistent with Washington County standards. The Washington County table confirms that the applicant's proposed design meets AASHTO standards since Washington County designs conform to AASHTO.

In fact, the applicant's proposed design exceeds Washington County's standards. Washington County's standard for both sag and crest curves require a "K" value of at least 5.0 at 15 mph. The applicant's proposed design will result in a "K" value of 5.3.

In order to clarify the authority to "set" speed limits, the applicant's engineer contacted the State of Oregon. The speed limit is set by the State as 25 miles per hour as the normal speed limit on all residential streets. Where specific sections of streets cannot meet this standard, cities have authorization to provide design exceptions that allow for sections of streets that they are in ownership of to be constructed, reconstructed, or repaired that don't meet the speed limit standards. The State administers design exceptions on its own highways as well. According to the State, design exceptions at the state level are mitigated by using advisory signs as well as other safety measures. Jurisdictions are, therefore, allowed to post special signs and take other measures to safely control traffic.

The applicant proposes two options:

Option 1: Advisory Signage

- A. Install "Bump" sign with 15 mph advisory sign below it.
- B. Install "DIP" sign with 15 mph advisory sign below it.

(Place sign in advance of crest or sag to allow safe reaction and deceleration time.)

Option 2: Three Way Stop Intersection

- A. Install a "3 -Way Stop" at the intersection of the new public road access to S.W. 74 Avenue.
- B. Install "DIP" sign with 15 mph advisory sign below it.

(Place sign in advance of crest or sag to allow safe reaction and deceleration time.)

Although Option 2 would result in a stop sign on S.W. 74 which is a through street, this would remove the need to sign the street for 15 miles per hour at the crest since the stop sign will slow traffic to an approach speed of 15 mph at the critical location. Although this would not meet warrants for a "need" by ASSHTO standards, this would be a very effective "legal" mitigation for the crest not meeting speed design standards. These measures would qualify as a mitigation for the sag and crest.

The City Engineer has determined that neither option presented is desirable. Option 1 seemingly calls for the installation of a speed bump, which could exacerbate the present deficient "K" value, and there is insufficient documentation in the record to indicate the effects of such a proposal. Option 2 proposes to install stop signs on a designated through route (SW 74<sup>th</sup> Avenue), without sufficient warrants to require the stop signs. The City Engineer has determined that placement of "15 mph" advisory signage in advance of the crest and sag in each direction are appropriate mitigation

measures and are sufficient to address the deficient "K" value. The City Engineer has determined that the sag should be monitored to verify whether the signage is sufficient to slow traffic. If not effective, the applicant will be required to install additional traffic control measures at the direction of the City Engineer within a year following completion of the street construction. A condition to this effect will be imposed:

**Recommended Condition of Approval (#52):**

Prior to commencing site work, the applicant shall submit construction drawings that show advisory "15 mph" speed limit signs to be placed in advance of the crest and sag curves on SW 74<sup>th</sup> in accordance with the City Engineer's Memorandum of January 25, 2005, which requires that the sag be monitored after construction to determine if any other measures need to be taken. The applicant shall be responsible for installation of additional measures within a year after construction of the street is accepted by the City if monitoring indicates that additional traffic control measures are needed.

**2. ASSIGNMENT OF ERROR 5(I)**

LUBA disagreed with the City's interpretation of the Development Code that would exempt properties with timber deferral status from filing a tree plan consisting of an inventory, removal plan, protection plan, and mitigation program. The text of their discussion follows:

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**I. Completeness and Adequacy of the Applicant's Tree Plan**

One section of the TCDC is entitled "Tree Removal." TCDC 18.790. We recently discussed this section of the TCDC at some length in *Miller v. City of Tigard*, 46 Or LUBA 536, 539-43 (2004). There are several sections of TCDC 18.790 that are relevant under this assignment of error.

**1. Tree Removal Permits**

TCDC.790.050 identifies circumstances where a permit is required from the city to remove a tree and identifies circumstances where a permit is not required to remove a tree.<sup>6</sup> Under TCDC 18.790.050(A), a city permit is required to remove any trees growing on sensitive lands. But under TCDC 18.790.050(A), no permit would be required from the city to remove the trees from the part of the subject property that falls outside the sensitive land area along the southern part of the property. TCDC 18.790.050(D)(4) appears to have been intended as a further qualification of the TCDC 18.790.050(A) requirement for a permit to remove trees on sensitive lands. But if TCDC 18.790.050(D) was intended to qualify TCDC 18.790.050(A), the final clause of TCDC 18.790.050(D)(4) renders the exemption inapplicable in the only circumstance it could apply, *i.e.*, where land in Christmas tree or forest tax deferral is on sensitive lands. The TCDC 18.790.050(D)(4) exemption is unnecessary for trees that are not located on sensitive lands, because TCDC 18.790.050(A) does not require a permit to remove such trees in the first place.

In summary, as far as we can tell, the applicant could remove all of the trees from the portion of the property that the applicant proposes to develop, without violating TCDC 18.790.050(A). That is because those

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<sup>6</sup>As relevant, TCDC 790.050 provides:

"A. Removal permit required. Tree removal permits shall be required only for the removal of any tree which is located on or in a sensitive land area as defined by Chapter 18.775.

"\* \* \* \* \*

"D. Removal permit not required. A tree removal permit shall not be required for the removal of a tree which:

"\* \* \* \* \*

"4. Is used for Christmas tree production, or [stands on] land registered with the Washington County Assessor's office as tax-deferred tree farm or small woodlands, but does not stand on sensitive lands."

trees are not located on sensitive lands, and TCDC 18.790.050(A) does not require a permit to remove trees unless those trees are located on sensitive lands.

## 2. The Tree Plan Requirement

TCDC 18.790.030 requires that a tree plan be provided when property is developed.<sup>7</sup> The precise nature of the obligation to protect trees through a tree plan is somewhat ambiguous. TCDC 18.790.030(A) states "[p]rotection is preferred over removal wherever possible." [See footnote 7]. But TCDC 18.790.010(C) expressly recognizes that trees may need to be removed to develop property,<sup>8</sup> and TCDC 18.790.030(B)(2) anticipates that more than 75% of the trees on a site may be removed to accommodate development, subject to mitigation requirements. [See footnote 7]. In addition to the somewhat ambiguous preference for preserving trees, the city also relies on a series of incentives for tree preservation, which are set out in TCDC 18.790.040.

## 3. Petitioner's Arguments

Petitioner challenges the adequacy of the applicant's tree protection plan. The focus of petitioner's challenge is on the part of the subject property that is to be developed, where most of the trees will be removed. It is not clear to what degree petitioner's arguments challenge the adequacy part of the plan that applies to the sensitive lands, where almost all of the trees are to be preserved. But petitioner's argument includes an overriding complaint that the applicant's tree protection plan evolved significantly over the course of the local proceedings and that it is difficult or impossible to determine with any degree of certainty precisely what the tree protection plan is.

The city and intervenor do not really respond to petitioner's arguments that the tree protection plan that the applicant submitted and the city ultimately approved is inadequate to comply with a number of particular requirements of TCDC 18.390.030. (emphasis added) Instead they rely on city council findings that no tree protection plan is required at all for the part of the property that lies outside the sensitive lands part of the property and that the plan to protect nearly all the trees on the sensitive lands is sufficient to comply with TCDC 18.390.030. We turn to those findings.

<sup>7</sup>TCDC 18.790.030 provides:

- "A. Tree plan required. A tree plan for the planting, removal and protection of trees prepared by a certified arborist shall be provided for any lot, parcel or combination of lots or parcels for which a development application for a subdivision, partition, site development review, planned development or conditional use is filed. Protection is preferred over removal wherever possible.
- "B. Plan requirements. The tree plan shall include the following:
- "1. Identification of the location, size and species of all existing trees including trees designated as significant by the city;
  - "2. Identification of a program to save existing trees or mitigate tree removal over 12 inches in caliper. Mitigation must follow the replacement guidelines of Section 18.790.060D, in accordance with the following standards and shall be exclusive of trees required by other development code provisions for landscaping, streets and parking lots:
    - "a. Retention of less than 25% of existing trees over 12 inches in caliper requires a mitigation program in accordance with Section 18.790.060D of no net loss of trees;
    - "b. Retention of from 25% to 50% of existing trees over 12 inches in caliper requires that two-thirds of the trees to be removed be mitigated in accordance with Section 18.790.060D;
    - "c. Retention of from 50% to 75% of existing trees over 12 inches in caliper requires that 50 percent of the trees to be removed be mitigated in accordance with Section 18.790.060D;
    - "d. Retention of 75% or greater of existing trees over 12 inches in caliper requires no mitigation.
  - "3. Identification of all trees which are proposed to be removed;
  - "4. A protection program defining standards and methods that will be used by the applicant to protect trees during and after construction. \* \* \*

<sup>8</sup>TCDC 18.790.010(C) provides:

"Recognize need for exceptions. The City recognizes that, \* \* \* at the time of development it may be necessary to remove certain trees in order to accommodate structures, streets utilities, and other needed or required improvements within the development."



#### 4. The City's Findings

Simply stated the city council found that a tree protection plan is not required for the part of the subject property where the applicant proposes to develop houses, notwithstanding the express requirement in TCDC 18.390.030 that a tree plan must be provided "for any lot, parcel or combination of lots or parcels for which a development application for a subdivision \* \* \* [or] planned development \* \* \* is filed." The city council reached this conclusion based in large part on the TCDC 18.390.050(D)(4) exemption for tree removal permits discussed above. The city council recognized that if TCDC 18.390.050 is read by itself, the TCDC 18.390.050(D)(4) exception serves no purpose, for the reasons we have already explained. To give TCDC 18.390.050(D)(4) some effect, the city council concluded it should be read to exempt proposals to develop lands that are not sensitive lands from the TCDC 18.390.030 requirements for a tree plan and for mitigation in certain circumstances. The fatal problem with that interpretation is that TCDC 18.390.050(D)(4) does not say anything about tree plans or mitigation; it is an unnecessary exception to the TCDC 18.390.050(A) requirement for a tree permit. We review a local governing body's interpretation of its land use regulations under the standard set out at ORS 197.829(1) and the Court of Appeals' decision in *Church v. Grant County*.<sup>9</sup> Even if interpreting TCDC 18.390.050(D)(4) in the way the city did here might have survived the more deferential standard of review that was required before *Church*, it cannot be affirmed under *Church*. Contrary to the city's argument, the city's interpretation does not merely clarify "the scope of the exemption" provided by TCDC 18.390.050(D)(4), it applies it to a tree plan requirement that it clearly does not apply to. The city council's interpretation is inconsistent with the express language of TCDC 18.390.050(D)(4).

The city council's policy reason for the interpretation it applied here presents only a slightly closer question. The city council concluded that no permit is necessary from the city to harvest trees outside sensitive lands. If the city is right about that, the applicant in this case could remove all of the trees in the area proposed for development and then submit the application, thereby avoiding any requirement to produce a tree plan for that area of the property. If that is true, there may be a loophole in the city's tree removal ordinance that in some circumstances may effectively eviscerate the TCDC 18.390.030 requirement for a tree plan and mitigation. Even if the applicant could take advantage of that loophole, as far as we know it has not done so, and the trees remain on the area of the property to be developed.

It is also important to note that the possibility that the applicant in this case could utilize the loophole to remove the trees before submitting an application does not render the requirement for a tree plan nonsensical. If the portions of a proposed development site that are not sensitive lands are not completely logged before development even though they could be logged, as will frequently be the case for a variety of reasons, there is nothing nonsensical about requiring a tree plan to protect those trees on lands to be developed, during and after the construction phase, and requiring mitigation for the trees that will be removed.

It may be that the tree plan that the applicant has proposed comes far closer to a tree plan for the entire property that complies with TCDC 18.390.030 than petitioner argues. However, without some assistance from the city and intervenor, we cannot conclude that the approved tree plan is consistent with TCDC 18.390.030. **We reject the city's attempt to interpret TCDC 18.390.030 with TCDC 18.390.050(D)(4) to conclude that no tree plan is required for the part of the site that does not qualify as sensitive lands. (Emphasis added)**

This subassignment of error is sustained.

#### ADDITIONAL FINDINGS AND ANALYSIS

<sup>9</sup>ORS 197.829(1) provides:

"[LUBA] shall affirm a local government's interpretation of its comprehensive plan and land use regulations, unless the board determines that the local government's interpretation:

- "(a) Is inconsistent with the express language of the comprehensive plan or land use regulation;
- "(b) Is inconsistent with the purpose for the comprehensive plan or land use regulation;
- "(c) Is inconsistent with the underlying policy that provides the basis for the comprehensive plan or land use regulation; or
- "(d) Is contrary to a state statute, land use goal or rule that the comprehensive plan provision or land use regulation implements."

In its decision, City Council interpreted its code to require a tree plan only in situations where the applicant was required to obtain a tree cutting permit to remove trees. The City reasoned that because the applicant in this case was not required to obtain a tree cutting permit for the majority of its site as it was in timber deferral, a tree plan for the entire site was not required. A tree plan was submitted for the balance of the site where sensitive lands were present.

LUBA rejected the City's interpretation. Accordingly, the applicant has submitted a tree plan encompassing the entire site and which includes all of the information required in TCDC 18.790.030. The City Forester has reviewed the plan and has agreed that it is acceptable, as noted in his Memorandum of January 24, 2005. The proposed attached tree plan and arborist's report establishes the trees to be saved and those to be cut. As reflected in that plan, there are 893 total trees on site that are larger than 12" diameter. Of those, 115 are deemed hazardous and are not subject to the mitigation requirement. From the remaining 778 net viable trees, 321 are proposed for removal. This constitutes a 59% retention. Since the total number of trees that will be retained is greater than 50%; one-half of the caliper inches being removed is required to be mitigated. A total of 6892 caliper inches are to be removed, so 3,446 caliper inches will be required to be replanted. This may be accomplished by either planting trees on-site, off-site or payment of a fee in lieu. To assure that mitigation is accomplished and that subsequent tree removals are undertaken in accordance with the requirements of this chapter, staff recommends that the following conditions be imposed:

**Recommended Conditions of Approval (#53 and #54):**

- Prior to commencing site work, the applicant shall submit a bond for the equivalent value of mitigation required (3,446 number of caliper inches times \$125 per caliper inch). If additional trees are preserved through the subdivision improvements and construction of houses, and are properly protected through these stages by the same measures afforded to other protected trees on site, the amount of the bond may be correspondingly reduced. Any trees planted on the site or off site in accordance with 18.790.060 (D) will be credited against the bond, for two years following final plat approval. After such time, the applicant shall pay the remaining value of the bond as a fee in lieu of planting.

Prior to issuance of building permits, the applicant/owner shall record a deed restriction to the effect that any existing tree greater than 12" diameter may be removed only if the tree dies or is hazardous according to a certified arborist. The deed restriction may be removed or will be considered invalid if a tree preserved in accordance with this decision should either die or be removed as a hazardous tree.

### **3. ASSIGNMENT OF ERROR 5(J)**

LUBA found that the City erred in its decision to grant adjustments to the street improvement standards (number of units on a cul de sac, length of a cul de sac, and curb tight sidewalks on SW 74<sup>th</sup>) by not providing sufficient findings to respond to the adjustment criteria. The text of their discussion follows:

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#### **J. Special Adjustments**

The challenged decision grants an adjustment to street improvement sidewalk construction standards to allow a curb-tight sidewalk where SW 74<sup>th</sup> Avenue crosses the drainageway. The challenged decision also grants two adjustments to allow construction of the proposed cul-de-sac. Those adjustments allow the cul-de-sac to exceed 200 feet in length and to serve 23 houses.<sup>10</sup>

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<sup>10</sup>Under the TCDC, cul-de-sac streets may provide access to no more than 20 houses. The adjustment allows the cul-de-sac to serve 23 houses. Apparently the first 200 feet of the cul-de-sac will provide access to lots 1 and 2 and lots 20-23. The adjustment to the

The city council's decision does not apply the special adjustment criteria set out at TCDC 18.370.020(C)(11), even though the adjustments all appear to be directed at street improvement requirements.<sup>11</sup> Instead, the city council applied the special adjustment criteria at TCDC 18.370.020(C)(1).<sup>12</sup> No party questions that choice by the city, and we therefore do not question it either. The city's findings addressing the TCDC 18.370.020(C)(1)(a) requirement that there be special circumstances are set out below:

"\* \* \* The applicant is requesting an adjustment to the 5-foot planter strip along 74<sup>th</sup> Avenue to reduce 1,100 additional square feet of impact to the drainageway and wetland area. The applicant proposes this curb tight sidewalk for the special circumstance where the development is required to cross the stream. Outside the resource area, the sidewalk will meet the required public street standards.

"Due to the presence of the sensitive lands, the development width of the property makes a looped street unfeasible. Also, because of existing development patterns adjacent to the site, the cul-de-sac could not be extended to the site's east property line. The applicant was able to extend a new public street to the north property line for future connectivity. The length of the cul-de-sac is the primary reason to exceed the 20 home maximum standard on this private street. Because of the special circumstances affecting this property, this criterion has been satisfied." Record 30a.

The city council's findings explaining why the adjustments are necessary for proper design and functioning of the subdivision under TCDC 18.370.020(C)(1)(b) are as follows:

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200-foot length limitation is necessary to provide access to lots 3 through 19. Otherwise a loop road would be required and it would appear that such a loop road would almost certainly have to encroach on the wetland and drainage area that is protected under the proposed plan.

<sup>11</sup>TCDC 18.370.020(C)(11) provides:

"Adjustments for street improvement requirements (Chapter 18.810). By means of a Type II procedure, as governed by Section 18.390.040, the Director shall approve, approve with conditions, or deny a request for an adjustment to the street improvement requirements, based on findings that the following criterion is satisfied: Strict application of the standards will result in an unacceptably adverse impact on existing development, on the proposed development, or on natural features such as wetlands, steep slopes or existing mature trees. In approving an adjustment to the standards, the Director shall determine that the potential adverse impacts exceed the public benefits of strict application of the standards."

<sup>12</sup>TCDC 18.370.020(C)(1) provides:

"Adjustments to development standards within subdivisions (Chapter 18.430): The Director shall consider the application for adjustment at the same time he/she considers the preliminary plat. An adjustment may be approved, approved with conditions, or denied provided the Director finds:

- "a. There are special circumstances or conditions affecting the property which are unusual and peculiar to the land as compared to other lands similarly situated;
- "b. The adjustment is necessary for the proper design or function of the subdivision;
- "c. The granting of the adjustment will not be detrimental to the public health, safety, and welfare or injurious to the rights of other owners of property; and
- "d. The adjustment is necessary for the preservation and enjoyment of a substantial property right because of an extraordinary hardship which would result from strict compliance with the regulations of this title."

The adjustment criteria at TCDC 18.370.020(C)(1) in some respects resemble traditional variance criteria, which are exceedingly difficult to satisfy. *Lovell v. Independence Planning Comm.*, 37 Or App 3, 586 P2d 99 (1978); *Wentland v. City of Portland*, 22 Or LUBA 15, 24-26 (1991); *Patzkowski v. Klamath County*, 8 Or LUBA 64, 70 (1983). However as the Court of Appeals made clear in *deBardelaben v. Tillamook County*, 142 Or App 319, 325-26, 922 P2d 683 (1996), LUBA is to extend appropriate deference to the city's interpretations of its own adjustment criteria. Under *Church v. Grant County*, the city is not entitled to the highly deferential standard of review that was required at the time *deBardelaben* was decided, but it still is entitled to appropriate deference under ORS 197.829(1) and *Church*.

"The adjustment request for the curb tight sidewalk is necessary to reduce impacts to the drainageway and wetlands. The adjustment for the cul-de-sac length is necessary to provide access to Lots 3-19 and to allow a turn around for emergency equipment and garbage trucks. The adjustment to allow more than 20 units to access the cul-de-sac is a result of both the length of the resulting cul-de-sac, and the desire to eliminate the need for a second redundant access serving three lots. Providing this second access would have reduced the amount of area available for buildings, with the result of eliminating the lots being served by it. Therefore, this criterion is satisfied." Record 30a-31.

The city council's finding regarding the TCDC 18.370.020(C)(1)(c) public health safety and welfare criterion is as follows:

"The Fire District has reviewed the proposed street design and has provided no objections to these adjustments. There is no evidence that these adjustments will be detrimental to the health safety or welfare to other property owners surrounding the site." Record 31.

Finally, the city council's finding regarding the TCDC 18.370.020(C)(1)(d) extraordinary hardship standard is as follows:

"Due to existing development patterns, the natural resources, and the shape of the site, the adjustment is necessary for the applicant to make use of substantial property rights. The applicant is proposing to build within the density prescribed for this site. The criteria for granting these adjustments to the street design, cul-de-sac length, and sidewalk standards have been satisfied." *Id.*

Petitioner assigns error to the city's findings concerning the TCDC 18.370.020(C)(1)(c) public health safety and welfare criterion and the TCDC 18.370.020(C)(1)(d) extraordinary hardship standard. We have set out the other city findings, on the first two criteria, because they have some bearing on the last two criteria.

Petitioner first contends that, contrary to the city's finding that there is no evidence that these adjustments will be "detrimental to the health safety or welfare to other property owners surrounding the site," there is a great deal of evidence to that effect. The city appears to be correct that some of the evidence cited by petitioner relates more to the development itself rather than the three adjustments that are at issue under this subassignment of error. **However, some of the evidence cited by petitioner clearly does address this criterion, and the city's finding that there is no such evidence is in error.** (Emphasis added) This part of subassignment of error 5(J) is sustained.

Petitioner also argues the city's finding that the adjustments are needed to preserve a substantial property right due to extraordinary hardship that would result from strict compliance with the adjusted standards are inadequate and are not supported by the evidentiary record.

Reading the city's findings concerning TCDC 18.370.020(C)(1)(a) and (d) together, we reject petitioners challenge to the findings regarding the cul-de-sac adjustments under TCDC 18.370.020(C)(1)(d). It is reasonably clear from those findings that if the applicant were forced to provide access to the proposed lots without the adjustments, much more of the property would have to be developed with roads, at a significant additional expense and with the potential loss of lots that would otherwise be approvable. It is reasonably clear that the city considers those impacts to constitute a hardship. We cannot say the city misinterpreted TCDC 18.370.020(C)(1)(d) or that its findings are inadequate to demonstrate that the cul-de-sac adjustments comply with that criterion.

The city's findings concerning TCDC 18.370.020(C)(1)(d) and the curb tight sidewalk are a different story. Although it appears that granting the adjustment would serve the desirable purpose of minimizing fill in

the wetland and drainage area, the city does not explain why it would be a hardship on the applicant to construct a conforming sidewalk.<sup>13</sup>

To summarize, the city's findings concerning TCDC 18.370.020(C)(1)(c) are inadequate for all three adjustments. The city's findings concerning TCDC 18.370.020(C)(1)(a) and (d) are sufficient to demonstrate that the cul-de-sac adjustments comply with TCDC 18.370.020(C)(1)(d). The city's findings concerning TCDC 18.370.020(C)(1)(d) are inadequate to demonstrate that the curb tight sidewalk adjustment satisfied that criterion.

## **ADDITIONAL FINDINGS AND ANALYSIS**

The City Council addressed the applicant's requested adjustment request under TCDC 18.370.020(C)(1), which is a general adjustment standard and not under TCDC 18.370.020(C)(11), which is specific to street improvements. The applicant has acknowledged that in its application material it too addressed the requested adjustments under the general standard as opposed to the specific standard. In its decision, LUBA concluded that the City's findings related to the health safety and welfare impacts of the three adjustments were insufficient. LUBA also concluded that the extraordinary hardship criterion to allow the curb tight sidewalk had not been sufficiently addressed. Staff asserts that the adjustment for the curb tight sidewalk was not necessary based on the strict criteria in Chapter 18.810, and provides findings for such a conclusion below. Nevertheless, the applicant has provided additional findings related to both the general adjustment standard as well as the specific street adjustment criteria. Staff agrees that the specific criteria related to street improvements are more appropriate to this decision than the more general criteria. Staff therefore believes that the specific criteria of TCDC 18.810.070(C), and 18.370.020(C)(11) apply rather than the general criteria of TCDC 18.370.020(C)(1). In the event that the Council or a reviewing entity take the position that the general criteria apply, findings relating to those criteria are also provided.

### **Planter Strip Requirement 18.810.070 (C)**

A planter strip separation of at least five feet between the curb and the sidewalk shall be required in the design of streets, except where the following conditions exist: there is inadequate right-of-way; the curbside sidewalks already exist on predominant portions of the street; it would conflict with the utilities, there are significant natural features (large trees, water features, etc) that would be destroyed if the sidewalk were located as required, or where there are existing structures in close proximity to the street (15 feet or less) Additional consideration for exempting the planter strip requirement may be given on a case by case basis if a property abuts more than one street frontage.

There is adequate right of way to accommodate the required planter strip, and sidewalks do not yet exist on predominant portions of the street. There are some potential conflicts with utilities, but not on the side where the planter strip is required. There are also no existing structures that would be in such close proximity to the new sidewalk. However, additional large trees and water features would be destroyed if the sidewalk were required to be moved five feet further east into the sensitive lands resource. Staff interprets the term "destroyed" to mean that additional trees would be removed, and additional area within the sensitive resource area would be disturbed by grading activity, vegetation removal and possible stream bank rechanneling. Although it is acknowledged that in some instances, these areas can be restored by the planting of new trees, or through revegetation and redirection of

<sup>13</sup>We note that there is no extraordinary hardship criterion like TCDC 18.370.020(C)(1)(d) in the special adjustment criteria for street improvement standards at TCDC 18.370.020(C)(11). See n 48. However, as previously noted, the city applied the special adjustment criteria at TCDC 18.370.020(C)(1) rather than the TCDC 18.370.020(C)(11) criteria.

the stream channel, it is the general preference and the expressed intent of this exemption to avoid the impact in the first place.

### **Specific Adjustment Criteria 18.370.020(C)(11)**

"Strict application of the standards will result in an unacceptably adverse impact on existing development, on the proposed development, or on natural features such as wetlands, steep slopes or existing mature trees. In approving an adjustment to the standards, the Director shall determine that the potential adverse impacts exceed the public benefits of strict application of the standards."

#### *Findings for Length of Cul de Sac (TCDC 18.810.030(L))*

Strict application of the 200 foot limitation on cul de sac length would result in an unacceptable adverse impact on the proposed development and natural features for the following reasons. Preexisting development surrounds a majority of the site to the north and east. Ash Creek cuts across the property from the southeast to the northwest. The only undeveloped area borders the 968 foot deep site for the first 490 feet. The last 478 feet could either be served by a long cul de sac, or a loop street. A loop street could not return to SW 74<sup>th</sup> without a high degree of encroachment into the stream and wetland resource. This near doubling of pavement would serve no additional units, and would likely result in the loss of the two lots on the south side of the stream. The other possible option would be to propose a street that would extend through the developed properties and ultimately connect with an adjacent public street. This would have adverse impacts upon existing development however. As described previously, there are no impacts to the public health safety or welfare from granting such an adjustment, so it follows that the impacts raised here exceed any benefit to the public from a strict adherence to this standard.

#### *Findings for Number of Units served By a Cul de Sac*

Strict application of the 20 unit maximum limitation on a cul de sac would result in an unacceptable adverse impact on the proposed development and natural features for the following reasons. Similar to the findings for the length of the cul de sac, it follows that with a cul de sac of this length, the number of units served by it will exceed the maximum allowed. In this case, there are three additional units on the private cul de sac. By strictly complying with this standard, the applicant would either have to lose three lots, an adverse impact on the proposed development, or reconfigure the through public street to accommodate the three additional units. Staff examined the future streets plan to assess what impact would result if the public street in Ash Creek Estates were extended to encompass the three additional lots presently on the cul de sac. Staff found that if the street were extended to encompass the three additional units, the extension of the public street north would either not align with SW Shady Place (thus requiring an adjustment to street spacing) or would not meet geometric curve requirements to make the alignment (thus requiring an adjustment to street improvement standards), or would need to terminate in a second cul de sac (thus requiring further adjustments to cul de sac length and number of units served). As noted previously, staff found that safety will not be impacted by the three additional units as the cul de sac street and intersection is in all other manners conforming with design requirements and capable of handling the additional vehicle trips. Also, TVF&R has determined that length does not affect safety with respect to the number of lots to be served by a cul-de-sac. The public welfare is moreover unaffected by the three additional houses on this cul de sac since the standard is intended to limit the use of lengthy culs-de sac and promote connectivity and transportation options. In this case, there are no available points to connect to, apart from what is already proposed by the future street plan. The existing development pattern and presence of resources prevent the development from complying with the block length standards. Accordingly, there are only two options to access the eastern lots in the proposed subdivision: one is a cul-de-sac and one is a looped street within the subdivision. A looped street would have to be constructed in environmentally sensitive land and would require significant excavation and/or fill.

With the proposed cul de sac, preservation of the stream bed and stormwater conveyance system will be achieved. This will serve to benefit the general welfare of the public at large. Therefore, staff finds that the potential adverse impacts exceed the public benefits of strict application of the standards.

*Findings for Curb Tight Sidewalk TCDC 18.810.030(L)*

Strict application of the 5 foot wide planter strip requirement would result in an unacceptable adverse impact on the proposed development and natural features for the following reasons. If a 5-foot planter strip was required, then an approximate 1,100 additional square feet of impact to the drainageway and wetland areas would occur. While this would not have an adverse impact on existing development, it would have some impact to the proposed development in terms of additional landform disturbance and cost. This would also certainly have an additional adverse impact to existing natural features including the stream, wetlands, and likely additional trees. The public benefit of a planter strip is the additional aesthetic amenity of breaking the hardscape mass. The presence of the large open stream channel behind the road and sidewalk will serve a similar purpose. Therefore, staff finds that the potential adverse impacts exceed the public benefits of strict application of the standards.

**General Adjustment Criteria 18.370.020(C)(1)**

"c. The granting of the adjustment will not be detrimental to the public health, safety, and welfare or injurious to the rights of other owners of property"

*Findings for Length of Cul de Sac (TCDC 18.810.030(L))*

Granting the requested adjustment will not be detrimental to the public health, safety and welfare of the public. Nor will it be injurious to the rights of other property owners.

The length of a cul-de-sac is a planning issue related to an attempt to geometrically control block sizes from becoming too long. This standard allows continuity of blocks without having long dead-end streets affecting block sizes. The applicant's engineer has evaluated this issue as part of a team whose responsibility it is to evaluate the methods set by Metro to control block geometry to increase connectivity. By limiting the length of cul de sacs, developers are encouraged to provide more through streets, thereby enhancing connectivity. This enhanced welfare is balanced by increased through traffic which may disturb residents. From a safety standpoint, culs-de-sac are vulnerable from the standpoint of only having one available ingress/egress. In certain situations, this access could become blocked preventing residents access to or from their homes. This is also balanced from a public safety perspective by the fact that culs-de-sac are more defensible spaces from burglary, and are generally less prone to break-ins and vandalism. The length of a cul de sac has no bearing on public health. Additionally, neither the Tigard Police nor TVF&R raised any safety concerns over the length of the proposed cul-de-sac. Extending the length of the cul-de-sac reduces the number of intersections and the safety risks associated with intersections.

Opponents testified generally that the adjustments allowing a longer cul-de-sac that would serve more than 20 residences would increase the amount of traffic and nearby streets and then concluded with no further evidence that an increase in traffic will automatically result in decreased safety. The City finds that the amount of traffic is a function of the number of proposed units, not the arrangement of streets. It may be the case that more traffic will use the single point of access, than if there were two entries into the street, but the net difference from a conforming cul de sac is approximately 30 trips per day (see the following findings related to 3 extra units on the cul de sac). This limited number of additional vehicles that will result from the adjustments as opposed to the development itself will not automatically result in decreased safety as the streets within and adjacent to the proposed subdivision are capable of handling the full amount of traffic from this development.



Moreover, when the property to the north is developed, a new street will connect to the proposed subdivision and serve to offset the traffic impact at SW 74<sup>th</sup> and the Ash Creek Estates public street intersection.

#### *Findings for Number of Units served By a Cul de Sac*

In examining the detrimental impacts to the public health, safety, and welfare, it is important to consider that a conforming cul de sac is limited to 20 units. The subject application represents an increase of 3 units. Many of the findings presented previously with regard to the length of the cul de sac are still relevant to these findings. However this request will result in a net increase of approximately 30 vehicle trips per day moving through the intersection of the public street and private cul de sac. There has been no evidence to suggest that the public health will be impacted by this additional traffic, as the total number of units is still within the permitted range of density on the site. In evaluating injury to the rights of other owners of property, the only adjacent property that may be affected by the proposed addition of 3 lots on the cul de sac is tax lot 200 (immediately north of the subject site). Staff examined the future streets plan to assess what impact would result if the public street in Ash Creek Estates were extended to encompass the three additional lots presently on the cul de sac. Staff found that if the street were extended to encompass the three additional units, the extension of the public street north would either not align with SW Shady Place (thus requiring an adjustment to street spacing) or would not meet geometric curve requirements to make the alignment (thus requiring an adjustment to street improvement standards), or would need to terminate in a second cul de sac (thus requiring adjustments to cul de sac length and number of units served). With the requested adjustment, the property rights of the adjacent owner are preserved. Staff found that safety will not be impacted by the three additional units as the cul de sac street and intersection is in all other manners conforming with design requirements and capable of handling the additional vehicle trips. Also, TVF&R has determined that length does not affect safety with respect to the number of lots to be served by a cul-de-sac. TVF&R makes the determination of whether the number of lots poses a safety concern. According to Eric McMullin, TVF&R requires two (2) accesses for safety when more than 25 residential houses are on a street. Here, that standard is met because only 23 houses will be served. The public welfare is moreover unaffected by the three additional houses on this cul de sac since the standard is intended to limit the use of lengthy culs-de sac and promote connectivity and transportation options. In this case, there are no available points to connect to, apart from what is already proposed by the future street plan. The existing development pattern and presence of resources prevent the development from complying with the block length standards. However, where the block length standards incorporated an exemption for these types of constraints, the cul de sac standards did not. Moreover, due to these prior development patterns, there is no way to connect the private street serving the lots to adjacent streets. Accordingly, there are only two options to access the lots in the proposed subdivision: one is a cul-de-sac and one is a looped street within the subdivision. A looped street would have to be constructed in environmentally sensitive land and would require significant excavation and/or fill. With the proposed cul de sac, preservation of the stream bed and stormwater conveyance system will be achieved. This will serve to benefit the general welfare of the public at large. Therefore, staff finds no basis to determine any detriment will occur to the public health, safety, or welfare nor does staff find that there is any injury to neighbors as a result of allowing the three additional units on this cul de sac. No additional conditions are warranted in this case.

#### *Findings for Curb Tight Sidewalk TCDC 18 810 030(L)*

Curb tight sidewalks in the area proposed will not be detrimental to the public health, safety and welfare or injurious to the rights of other property owners. (The curb tight sidewalk can be considered safe because the area behind the sidewalk has a flat spot which allows pedestrians to keep to the outside while walking.) Curb tight sidewalks are used often and are an alternate location in many



similar public streets throughout the city. This is not a safety concern. Instead, this detail is used where only a few curb cuts are proposed. Planting strips provide for street furniture and places to put mailboxes, power poles, streetlights, telephone pedestals, and power pedestals. This area does not have many of these features. In addition, as discussed above, the traffic in the area of the proposed adjustment will be traveling relatively slowly due to the topography of the road. With a normal sized sidewalk, there will not be pedestrian/vehicle conflicts. The curb-tight sidewalks result in less impact to the stream, and a healthy environment contributes to public health.

"c. The adjustment is necessary for the preservation and enjoyment of a substantial property right because of an extraordinary hardship which would result from strict compliance with the regulations of this title.

#### *Findings for Curb Tight Sidewalk TCDC 18 810 030(L)*

Without granting the adjustment, the applicant would be required to amend the Division of State Lands and Army Corps joint wetland permit. One aspect these agencies seek in wetland fill/encroachment permits is minimization of disturbance to the resource. It is conjecture to speculate that the applicant would not be able to obtain such an amendment to their permit; however, it is important to consider the possibility. Without the DSL/Army Corps approval, the project would not be allowed to proceed, depriving the applicant of the ability to develop the property at the allowed density. The other hardship that would be encountered is the additional cost associated with either additional fill, or larger retaining walls. Since the value of the exaction for the roadway stream crossing is already disproportionate, additional costs placed on this crossing result in an exceeding hardship on the applicant. The applicant would therefore be denied the rights to develop his property within the normal limits of takings law.

As the findings for granting the adjustments have been met, no additional conditions of approval are warranted.

#### **4. ASSIGNMENT OF ERROR 5(K)**

Lastly, LUBA found that since there had been no tree plan filed to establish the methods and extent of tree protection requirements, it was premature to determine whether sufficient protection had been afforded to plant materials. The text of their discussion follows:

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#### **K. Landscaping**

One of the specific planned development criteria is TCDC 18.350.100(B)(3)(g)(1).<sup>14</sup> Petitioner contends that the city erred in counting the 44 percent of the site that will be included in the open space and drainage tract on the site, which will be left in its current undeveloped state, in applying the TCDC 18.350.100(B)(3)(g)(1) landscaping requirement. Petitioner contends that TCDC 18.350.100(B)(3)(g)(1) requires more proactive landscaping efforts on the part of the applicant.

The city's interpretation of TCDC 18.350.100(B)(3)(g)(1) to allow the open space area that is to be left in its natural state to be counted toward the TCDC 18.350.100(B)(3)(g)(1) 20% landscaping requirement is implicit. Record 29. The city contends that it is a sustainable interpretation under ORS 197.829(1) and *Church*. We agree with the city.

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<sup>14</sup>TCDC 18.350.100(B)(3)(g)(1) imposes the following requirement:

Residential Development: In addition to the requirements of subparagraphs (4) and (5) of section a of this subsection, a minimum of 20 percent of the site shall be landscaped[.]”

Petitioner also cites TCDC 18.745.030(E) and TCDC 18.350.100(B)(3)(a)(5) and argues that the applicant's landscape plan fails to protect existing vegetation "as much as possible" or replace trees.<sup>15</sup> **The city does not respond to petitioner's contention concerning preservation of vegetation during construction under TCDC 18.745.030(E).** Accordingly, we sustain that part of subassignment of error 5(K). (Emphasis added). Petitioner's contention regarding TCDC 18.350.100(B)(3)(a)(5) is not clear. We have already sustained petitioner's subassignment of error 5(I). Until that deficiency is considered by the city on remand, it is premature to consider whether there is any obligation to replace any trees in the area to be developed, beyond the replacement trees that are already proposed.

This subassignment of error is sustained in part.

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## **ADDITIONAL FINDINGS AND ANALYSIS**

LUBA had found that since the applicant had not prepared a tree plan, there was inadequate evidence to evaluate the petitioner's claim that vegetation was not being protected. The applicant has submitted the required tree plan, including a protection program. Apart from the areas that will be disturbed to construct the infrastructure (sewer, water, storm drainage, streets, etc.) and the lots that will be graded for soil stability and proper drainage, the remainder of the site will be required to be protected from disturbance. The applicant will be required to erect protection fencing around each tree or group of trees to be retained. To ensure that the remaining vegetation is protected as much as possible, the following conditions should be required.

### **Recommended Conditions of Approval (#55, 56, 57, 58):**

Prior to commencing any site work, the applicant shall submit construction drawings that include the approved Tree Removal, Protection and Landscape Plan. The "Tree Protection Steps" identified in Teragan & Associates Letter of November 19, 2004 shall be reiterated in the construction documents. The plans shall also include a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving. Only those trees identified on the approved Tree Removal plan are authorized for removal by this decision.

Prior to commencing any site work, the applicant shall establish fencing as directed by the project arborist to protect the trees to be retained. The applicant shall allow access by the City Forester for the purpose of monitoring and inspection of the tree protection to verify that the tree protection measures are performing adequately. Failure to follow the plan, or maintain tree protection fencing in the designated locations shall be grounds for immediate suspension of work on the site until remediation measures and/or civil citations can be processed.

Prior to final plat approval, the applicant shall ensure that the Project Arborist has submitted written reports to the City Forester, at least, once every two weeks, from initial tree protection zone (TPZ) fencing installation, through site work, as he monitors the construction activities

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<sup>15</sup>TCDC 18.745.030(E) provides:

"Protection of existing vegetation. Existing vegetation on a site shall be protected as much as possible.

"1. The developer shall provide methods for the protection of existing vegetation to remain during the construction process; and

"2. The plants to be saved shall be noted on the landscape plans (e.g., areas not to be disturbed can be fenced, as in snow fencing which can be placed around individual trees).

TCDC 18.350.100(B)(3)(a)(5) provides:

"Trees preserved to the extent possible. Replacement of trees is subject to the requirements of Chapter 18.790, Tree Removal."

and progress. These reports should include any changes that occurred to the TPZ as well as the condition and location of the tree protection fencing. If the amount of TPZ was reduced then the Project Arborist shall justify why the fencing was moved, and shall certify that the construction activities to the trees did not adversely impact the overall and long-term health and stability of the tree(s). If the reports are not submitted or received by the City Forester at the scheduled intervals, and if it appears the TPZ's or the Tree Protection Plan is not being followed by the contractor, the City shall stop work on the project until an inspection can be done by the City Forester and the Project Arborist. This inspection will be to evaluate the tree protection fencing, determine if the fencing was moved at any point during construction, and determine if any part of the Tree Protection Plan has been violated.

Prior to issuance of building permits, the applicant shall submit site plan drawings indicating the location of the trees that were preserved on the lot, location of tree protection fencing, and a signature of approval from the project arborist regarding the placement and construction techniques to be employed in building the house. All proposed protection fencing shall be installed and inspected prior to commencing construction, and shall remain in place through the duration of home building. After approval from the City Forester, the tree protection measures may be removed.

## **SECTION VII. CONCLUSION**

In conclusion, the City asserts that the applicant has adequately responded to the errors identified by LUBA, and has supplemented the record with additional information and evidence with which to evaluate the findings. Staff concurs with the applicant on these findings, and has recommended several additional conditions of approval to ensure that these standards and practices are implemented as part of this final decision. Staff therefore recommends approval of the Ash Creek Estates Subdivision, case file SUB2003-00010/ ZON2003-00003/ PDR2003-00004/ SLR2003-00005/ VAR2003-00036/ VAR2003-00037.

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PREPARED BY: Morgan Tracy  
Associate Planner

\_\_\_\_\_  
January 25, 2005  
DATE

\_\_\_\_\_  
APPROVED BY: Dick Bewersdorff  
Planning Manager

\_\_\_\_\_  
January 25, 2005  
DATE

## CITY OF TIGARD, OREGON

RESOLUTION NO. 03-61

A RESOLUTION TO AMEND RESOLUTION 03-58, APPROVING THE ASH CREEK ESTATES PLANNED DEVELOPMENT, TO CORRECT THE REFERENCED DATE OF THE APPLICANT'S LETTER ESTABLISHING THE CONDITIONS OF APPROVAL.

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WHEREAS, the Planning Commission reviewed the Ash Creek Estates Planned Development proposal at a public hearing at its meeting of July 7, 2003; and

WHEREAS, the Planning Commission made motions to both deny and approve the application, both of which failed in a 4-4 tie vote; and

WHEREAS, the by-laws of the Planning Commission and Robert's Rules of Order specify that if an affirmative vote in favor of an application is not attained, the application is denied. Since the denial occurred de facto, no findings were adopted, and the denial is without prejudice; and

WHEREAS, the City Council held a public hearing on the appeal of the denial on August 12, 2003 which was continued to September 9, 2003 to take additional testimony; and

WHEREAS, the City Council reviewed the testimony, submittals, and staff report on August 12, 2003 and September 9, 2003, and reviewed findings and conditions of approval that were prepared by the applicant, Winwood Construction, on October 28, 2003; and

WHEREAS, the City Council concluded that the proposed development with the conditions of approval as prepared by the applicant, would be in compliance with all applicable decision criteria; and

WHEREAS, the City Council adopted a resolution approving the Ash Creek Estates Subdivision that included a reference to Exhibit A, the applicant's letter dated September 26, 2003, where the correct date of that letter and Exhibit as included with the previous resolution was in fact October 10, 2003, and Council wishes that the record reflect the accurate date;

NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: The Tigard City Council approves applications SUB2003-00010/PDR2003-00004/ZON2003-00003/SLR2003-00005/VAR2003-00036/VAR2003-00037 - Ash Creek Estates Subdivision, subject to the conditions of approval stated in the letter dated October 10, 2003, from Steve Kay of Kurahashi Associates to the City of Tigard, attached with Resolution 03-58 and incorporated herein by this reference.

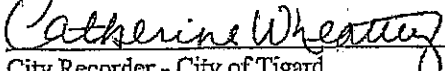
SECTION 2: The Tigard City Council adopts the findings stated in the Staff Report to the Planning Commission, attached with Resolution 03-58 (as Exhibit B) and incorporated herein by this reference. The Council further adopts the findings stated in the applicant's October 10<sup>th</sup>, 2003 letter, attached with Resolution 03-58 (as Exhibit A) and incorporated herein by this reference.

SECTION 3: This resolution is effective immediately upon passage.

PASSED: This 4<sup>th</sup> day of November 2003.

  
Mayor - City of Tigard

ATTEST:

  
City Recorder - City of Tigard

## CITY OF TIGARD, OREGON

RESOLUTION NO. 03- 58

A RESOLUTION AND FINAL ORDER APPROVING THE ASH CREEK ESTATES SUBDIVISION (SUBDIVISION (SUB) 2003-00010/PLANNED DEVELOPMENT REVIEW (PDR) 2003-00004/ZONE CHANGE (ZON) 2003-00003/SENSITIVE LANDS REVIEW (SLR) 2003-00005/ADJUSTMENT (VAR) 2003-00036/ADJUSTMENT (VAR) 2003-00037), ADOPTING FINDINGS AND IMPOSING CONDITIONS.

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WHEREAS, the Planning Commission reviewed this case at a public hearing at its meeting of July 7, 2003; and

WHEREAS, the Planning Commission made motions to both deny and approve the application, both of which failed in a 4-4 tie vote; and

WHEREAS, the by-laws of the Planning Commission and Robert's Rules of Order specify that if an affirmative vote in favor of an application is not attained, the application is denied. Since the denial occurred de facto, no findings were adopted, and the denial is without prejudice; and

WHEREAS; the City Council held a public hearing on the appeal of the denial on August 12, 2003 which was continued to September 9, 2003 to take additional testimony; and

WHEREAS, the City Council reviewed the testimony, submittals, and staff report on August 12, 2003 and September 9, 2003, and reviewed findings and conditions of approval that were prepared by the applicant, Winwood Construction, on October 28, 2003; and

WHEREAS, the City Council concluded that the proposed development with the conditions of approval as prepared by the applicant, would be in compliance with all applicable decision criteria;


NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: The Tigard City Council approves applications SUB2003-00010/PDR2003-00004/ZON2003-00003/SLR2003-00005/VAR2003-00036/VAR2003-00037 - Ash Creek Estates Subdivision, subject to the conditions of approval stated in the letter dated September 26, 2003, from Steve Kay of Kurahashi Associates to the City of Tigard, attached hereto as Exhibit A and incorporated herein by this reference.

SECTION 2: The Tigard City Council adopts the findings stated in the Staff Report to the Planning Commission, attached hereto as Exhibit B and incorporated herein by this reference. The Council further adopts the findings stated in the above-referenced Exhibit A.

SECTION 3: This resolution is effective when notice of the decision is mailed.

PASSED: This 28<sup>th</sup> day of October 2003.

  
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Mayor - City of Tigard

ATTEST:


  
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City Recorder - City of Tigard

Exhibit A

Steve Kay  
Kurahashi and Associates  
15580 SW Jay Street, Ste 200  
Beaverton, OR 97006

October 10, 2003

City of Tigard  
City Council Members  
13125 SW Hall Blvd.  
Tigard, OR 97223

**Re: Findings For Ash Creek Estates Subdivision, SUB2003-00010**

Dear City Council Members:

On September 9, 2003, the City Council approved the application for the Ash Creek Estates Subdivision, SUB2003-00010. On behalf of the applicant, Windwood Construction, we are submitting findings that demonstrate how the applicant has met the approval criteria identified in the Staff Report. Applicable development criteria, responses to those criteria, and additional suggested Conditions of Approval are provided below.

## **APPLICABLE REVIEW CRITERIA AND FINDINGS:**

### **CHAPTER 18.350: PLANNED DEVELOPMENTS**

#### **The Planned Development Process:**

Section 18.350.030 states that there are three elements to the planned development approval process, as follows:

- The approval of the planned development overlay zone;
- The approval of the planned development concept plan; and
- The approval of the detailed development plan.

**Findings:** As required, the applicant has followed the Planned Development process for this application. This application has been submitted for approval of the planned development overlay zone, concept plan, and detailed plan.

#### **Applicability of the Base Zone Standards:**

Section 18.350.070 requires compliance to specific development standards: The provisions of the base zone are applicable as follows:

#### **Lot dimensional standards:**

The minimum lot size, lot depth and lot width standards shall not apply except as related to the density computations under Chapter 18.715;



**Findings:** As allowed under the planned development process, the applicant has requested smaller lot sizes than required by the R-4.5 zone. Proposed lot widths are 50 feet or wider and lot depths are 68-153 feet deep. As required by the Conditions of Approval, the applicant will be required to modify Lot 29 so that it meets frontage standards. The applicant has met the density requirements as discussed later in these findings.

**Site coverage:**

**The site coverage provisions of the base zone shall apply;**

**Findings:** The R-4.5 zone does not have site coverage requirements, therefore this standard does not apply.

**Building height:**

**The building height provisions shall not apply;**

**Findings:** The applicant has not proposed an alternative height standard with this application, therefore the application is subject to the standards of the base zone.

**Structure setback provisions:**

**Front yard and rear yard setbacks for structures on the perimeter of the project shall be the same as that required by the base zone unless otherwise provided by Chapter 18.360;**

**Findings:** The applicant has met this standard by submitting a site plan illustrating building envelopes within the development. Perimeter setbacks are as required by the base zone, and are further described as a 15-foot rear yard setback on Lots 1-13, a 20-foot front yard setback for Lots 24-27, and a 10-foot south side yard for Lot 29, a flag lot. In the interior of the site, the applicant proposes an 8-foot front yard setback to primary structures and porches. Setbacks to the face of the garage is proposed to remain at 20 feet from the front property line of Lots 12-26. Setbacks to the garage on Lots 1-11 are proposed to be 22.5 feet, where sidewalks are 4.5 feet on to those lots.

**The side yard setback provisions shall not apply except that all detached structures shall meet the Uniform Building Code (UBC) requirements for fire walls;**

**Findings:** The applicant proposed to reduce the side yard setback from 5 to 3 feet, which is the minimum separation required for UBC compliance. No projections including bay windows or chimneys, shall be allowed into the side areas. Therefore, this criterion has been met.

**Front yard and rear yard setback requirements in the base zone setback shall not apply to structures on the interior of the project except that: (1) A minimum front yard setback of 20 feet is required for any garage structure which opens facing a street; (2) A minimum front yard setback of 8 feet is required for any garage opening for an attached single-family dwelling facing a street as long as the required off-street parking spaces are provided.**

**Findings:** As mentioned previously, the applicant proposes an 8-foot front yard setback to primary structures and porches and setbacks to the face of the garage is proposed to remain at 20 to 22.5 feet. However, several of the rear setbacks have been modified with this application. Staff has recommended that the rear yard setbacks for lots with depths of 100 feet or more (e.g. lots 13 through 18) not be reduced. As required by the staff's Conditions of Approval, the applicant is required to maintain a 20-foot rear yard setback for Lots 27 and 28. With the Condition of Approval, this criterion has been met.

**Other provisions of the base zone:**

**All other provisions of the base zone shall apply except as modified by this chapter.**

**Findings:** Required provisions of the base zone have been satisfied by the applicant. All other provisions of the base zone will be met during the building permit phase.

**PD Approval Criteria: 18.350.100**

**Specific planned development approval criteria.** The Commission shall make findings that the following criteria are satisfied when approving or approving with conditions, the concept plan. The Commission shall make findings that the criteria are not satisfied when denying an application.

**All the provisions of the land division provisions, Chapters 18.410, 18.420 and 18.430, shall be met;**

**Findings:** The applicant has requested to subdivide the property concurrently with the planned development approval, therefore this criterion has been met. The applicant's compliance with Chapters 18.410, 18.420 and 18.430 is discussed below.

**Except as noted, the provisions of the following chapters shall be utilized as guideline. A planned development need not meet these requirements where a development plan provides alternative designs and methods, if acceptable to the Commission, that promote the purpose of this section. In each case, the applicant must provide findings to justify the modification of the standards in the chapters listed on Subsection 3 below. The developer may choose to provide or the commission may require additional open space dedication and/or provision of additional amenities, landscaping or tree planting.**

**Chapter 18.715, Density Computation and Limitations.** Unless authorized below, density shall be governed by the density established in the underlying zoning district. The Commission may further authorize a density bonus not to exceed 10% as an incentive to increase or enhance open space, architectural character and/or site variation incorporated into the development. These factors must make a substantial contribution to objectives of the planned development. The degree of distinctiveness and the desirability of variation achieved shall govern the amount of density increase which the Commission may approve according to the following:

- **A maximum of 3% is allowed for the provision of undeveloped common space.**
- **A maximum of 3% is allowed for landscaping; streetscape development; developed open spaces, plazas and pedestrian pathways and related amenities; recreation area development, and/or retention of existing vegetation;**
- **A maximum of 3% is allowed for creation of visual focal points; use of existing physical amenities such as topography, view, and sun/wind orientation;**
- **A maximum of 3% quality of architectural quality and style; harmonious use of materials; innovative building orientation or building grouping; and/or varied use of housing types.**

**Findings:** The applicant has not requested any modifications to the density standards, therefore this

standard has been met. Density will be further discussed under Chapter 18.715 below.

**Chapter 18.730: Exceptions To Development Standards**

**Findings:** The applicant has requested modifications to the lot standards under the planned development process, therefore this criterion is not applicable.

**Chapter 18.795: Visual Clearance Areas**

**Findings:** As required, the applicant has submitted plans which show that visual clearance areas at street intersections will be maintained free from obstructions taller than 3 feet in height. The applicant's plans identify that vision clearance areas and sight distance requirements will be met at the intersection of 74<sup>th</sup> Avenue and Street 'A', as well as at the intersection of the proposed Street 'A' and the new private street. Compliance with vision clearance requirements will be confirmed by a post improvements-construction sight distance certification and through the building permit process for all homes to be constructed within the development. Therefore, this criterion has been met by the applicant.

**Chapter 18.745: Landscaping And Screening**

**Findings:** There is no landscaping buffer requirement between the proposed detached single-family development and the adjacent detached single-family developments. However, the applicant is required to landscape 20% of the site because of the request for a Planned Development. The applicant has provided a street tree plan for 74<sup>th</sup> Avenue and has proposed to leave the open space tract in its natural state to meet this criterion. The open space accounts for 44% of the site, which already contains more than the 20% gross site area of landscaped areas, therefore this criterion is met.

**Chapter 18.765: Off-Street Parking And Loading Requirements**

**Findings:** The minimum requirement for household living is one space for every dwelling unit. The applicant has proposed 2-car garages and another 2 spaces into each of each garage for every lot within the development, therefore this criterion is satisfied.

**Chapter 18.705: Access, Egress And Circulation**

**Findings:** The applicant has provided access to every lot through a minimum 10-foot wide driveway that connects to a public or private street. The proposed street improvements are evaluated later in this report.

**Chapter 18.780: Signs**

**Findings:** No signs are requested with this application. There has been a proliferation of sign violations from marketing new subdivisions. In accordance with a policy adopted by the Director's Designee, all new subdivision developers must enter into a sign compliance agreement to facilitate a more expeditious court process for citations. The applicant has been required to sign this compliance agreement through a condition of approval.

**In addition, the following criteria shall be met:**

**Relationships to the natural and physical environment:**

**The streets, buildings and other site elements shall be designed and located to preserve the existing trees, topography and natural drainage to the greatest degree possible;**

**Findings:** The applicant has proposed to remove the trees within the developable area and retain all trees in the open space tract, except where they are impacted by public facility improvements. Removal of these trees is allowed due to the site's forest timber deferral status. Since the open space tract also contains the natural drainage way, it will be preserved by the proposal. The drainageway will only be slightly impacted by the City required extension of 74<sup>th</sup> Avenue, but this impact will be minimized by utilizing curb tight sidewalks to limit fill encroachment. During the hearing, the applicant further proposed to retain trees within a 15 foot perimeter where proposed lots abut existing homesites on the north and east boundaries of the site (Lots 1-13). Additionally, the applicant proposed enacting a CC&R related to continued preservation of trees left on site following development.

An erosion control and grading plan will be required during the engineering approval process to ensure sensitive areas will not be impacted by sedimentation or erosion, as well as to mitigate off-site impacts. The erosion control plan will ensure that areas where landform alteration takes place will be replanted. The applicant has also submitted a geotech report, which indicates which areas should and should not be developed. As a Condition of Approval, the applicant will be required to undertake further geotechnical investigations in for Lots 13-15, 22 and 23. The applicant is also conditioned to have the geotechnical engineer review the proposed building placement grading plans prior to final plat approval. Therefore, as required, the applicant has met this criterion to the greatest extent possible.

**Structures located on the site shall not be in areas subject to ground slumping and sliding;**

**Findings:** The applicant's geotech report indicates areas of slumping and sliding in the proposed open space tract, where development is not proposed. Lots 13-15 and between lots 22 and 23 have steep slopes and groundwater that was encountered during digging of the test pits. As a Condition of Approval, the applicant will be required to undertake further investigations in these areas.

**There shall be adequate distance between on-site buildings and other on-site and off-site buildings on adjoining properties to provide for adequate light and air circulation and for fire protection;**

**Findings:** The applicant does not propose to reduce the rear setbacks for Lots 1-12. For the interior of site, the street and front yard setbacks will establish ample distance between the homes. The applicant also proposes 3-foot side yards between interior lots, which complies with UBC standards. Therefore, this criterion has been satisfied.

**The structures shall be oriented with consideration for the sun and wind directions, where possible; and**

**Findings:** The applicant has oriented proposed structures in a north-south direction to the extent possible to provide for opportunities to maximize southern glazing exposure.

**Trees preserved to the extent possible. Replacement of trees is subject to the requirements of Chapter 18.790, Tree Removal.**

**Findings:** As mentioned previously, removal of trees outside the sensitive land area is allowed due to the site's forest timber deferral status. **Some trees within the open space tract will require removal to account for utility construction and for the street crossing, but these have been design to minimize impacts on trees.** The applicant has preserved trees in the open space tract to the maximum extent possible.

**Buffering, screening and compatibility between adjoining uses;  
Buffering shall be provided between types of land uses, e.g., between single-family and multi-family residential, and residential and commercial uses;**

**Findings:** The applicant is proposing a detached single-family residential development and adjacent properties are also detached single-family residential developments. Therefore, according to the development code, this criterion is not applicable to this application.

**In addition to the requirements of the buffer matrix (Table 18.745.1), the following factors shall be considered in determining the adequacy and extent of the buffer required under Chapter 18.745:**

- **The purpose of the buffer, for example to decrease noise levels, absorb air pollution, filter dust, or to provide a visual barrier;**
- **The size of the buffer needs in terms of width and height to achieve the purpose;**
- **The direction(s) from which buffering is needed;**
- **The required density of the buffering; and**
- **Whether the viewer is stationary or mobile.**

**Findings:** There are no buffering requirements between the proposed single-family homes and the existing single-family homes; therefore this criterion is not applicable.

**On-site screening from view from adjoining properties of such activities as service areas, storage areas, parking lots and mechanical devices on roof tops shall be provided and the following factors shall be considered in determining the adequacy of the type and extent of the screening: (a) What needs to be screened; (b) The direction from which it is needed; and c) Whether the screening needs to be year-round.**

**Findings:** There are no service areas, storage areas, parking lots or mechanical devices proposed with this development, therefore this criterion is not applicable.

**Privacy and Noise:**

**Non-residential structures which abut existing residential dwellings shall be located on the site or be designed in a manner, to the maximum degree possible, to protect the private areas on the adjoining properties from view and noise; Private outdoor area - multi-family use: Shared outdoor recreation areas - multi-family use:**

**Findings:** The applicant is proposing single-family dwelling units. These criteria relate to non-residential or multi-family structures.

**Access and Circulation:**

**The number of allowed access points for a development shall be provided in Chapter 18.705;**

**Findings:** Lots 1-27 have direct frontage to a local public or private street in the interior of the site. As a Condition of Approval, Lots 28 and 29 will share a common driveway to 74<sup>th</sup> Avenue, a Neighborhood Route.

**All circulation patterns within a development must be designated to accommodate emergency vehicles; and**

**Findings:** Tualatin Valley Fire and Rescue have reviewed the proposal and indicated that the proposed circulation system is acceptable if certain conditions are addressed. To satisfy these conditions, the applicant must satisfy the following conditions before by the applicant is issued building permits:

1. **FIRE APPARATUS ACCESS ROAD WIDTH AND VERTICAL CLEARANCE:** Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (15 feet for one or two dwelling units and out buildings), and an unobstructed vertical clearance of not less than 13 feet 6 inches. (UFC Sec. 902.2.2.1) Where fire apparatus roadways are less than 28 feet wide, "NO PARKING" signs shall be installed on one side of the roadway and in turnarounds as needed. Where fire apparatus roadways are 32 feet wide or more, parking is not restricted. (UFC Sec. 902.2.4)
2. **NO PARKING SIGNS:** Where fire apparatus roadways are not of sufficient width to accommodate parked vehicles and 20 feet of unobstructed driving surface, "No Parking" signs shall be installed on one or both sides of the roadway and in turnarounds as needed. (UFC Sec. 902.2.4) Signs shall conform to the City of Tigard engineering standards.
3. **TURNING RADIUS:** The inside turning radius and outside turning radius shall not be less than 25 feet and 45 feet respectively, measured from the same center point. (UFC Sec. 902.2.2.3)
4. **GRADE:** Private fire apparatus access roadway grades shall not exceed an average grade of 10 percent with a maximum grade of 15 percent for lengths of no more than 200 feet. Intersections and turnarounds shall be level (maximum 5%) with the exception of crowing for water run-off. Public streets shall have a maximum grade of 15%. (UFC Sec. 902.2.2.6)
5. **SINGLE FAMILY DWELLINGS AND DUPLEXES – FIRE HYDRANTS:** Fire hydrants for single family dwellings, duplexes and subdivisions, shall be placed at each intersection. Intermediate fire hydrants are required if any portion of a structure exceeds 500 feet from a hydrant at an intersection as measured in an approved manner around the outside of the structure and along approved fire apparatus access roadways. Placement of additional fire hydrants shall be as approved by the Chief. (UFC Sec. 903.4.2.2)
6. **FIRE HYDRANT DISTANCE FROM AN ACCESS ROAD:** Fire hydrants shall be located not more than 15 feet from an approved fire apparatus access roadway. (UFC Sec. 903.4.2.4)
7. **REFLECTIVE HYDRANT MARKERS:** Fire hydrant locations shall be identified by the installation of reflective markers. The markers shall be blue. They shall be located adjacent and

to the side of the centerline of the access road way that the fire hydrant is located on. In case that there is no center line, then assume a centerline, and place the reflectors accordingly. (UFC Sec. 901.4.3)

8. **SINGLE FAMILY DWELLINGS – REQUIRED FIRE FLOW:** The minimum available fire flow for single family dwellings and duplexes shall be 1,000 gallons per minute. If the structure(s) is (are) 3,600 square feet or larger, the required fire flow shall be determined according to UFC Appendix Table A-III-A-1. (UFC Appendix III-A, Sec. 5)
9. **ACCESS AND FIRE FIGHTING WATER SUPPLY DURING CONSTRUCTION:** Approved fire apparatus access roadways and fire fighting water supplies shall be installed and operational prior to any other construction on the site or subdivision (UFC Sec. 8704)

**Provisions shall be made for pedestrian and bicycle ways if such facilities are shown on an adopted plan.**

**Findings:** SW 74<sup>th</sup> Avenue, which fronts the development, is a Neighborhood Route but has not been designated for bike lanes. This criterion does not apply.

**Landscaping and open space:**

**Residential Development:** In addition to the requirements of subparagraphs (4) and (5) of section a of this subsection, a minimum of 20 percent of the site shall be landscaped;

**Findings:** The open space and drainage tracts of this proposal account for 44% of the site area. That in combination of the landscaping on the site will exceed the minimum 20% landscape criteria. Much of the open space area will remain in its natural state, however, areas of steep slopes that are disturbed must be replanted according to the geotech report. Additionally, areas within the drainageway and wetlands will require mitigation replanting per Clean Water Services and the Division of State Lands requirements. Therefore, this criterion has been met.

**Public Transit:**

**Provisions for public transit may be required where the site abuts a public transit route. The required facilities shall be based on:**

- The location of other transit facilities in the area; and
- The size and type of the proposed development

**The required facilities shall be limited to such facilities as:**

- A waiting shelter;
- A turn-out area for loading and unloading; and
- Hard surface connecting the development to the waiting area

**Findings:** The site does not abut a public transit route, therefore this criterion is not applicable.

**Signs:**

**Findings:** No signs are proposed with this development. There has been a proliferation of sign violations from marketing new subdivisions. In accordance with a policy adopted by the Director's Designee, all new

subdivision developers must enter into a sign compliance agreement to facilitate a more expeditious court process for citations. The applicant has been required to sign this compliance agreement through a condition of approval

**Parking:**

**All parking and loading areas shall be generally laid out in accordance with the requirements set forth in Chapter 18.765;**

**Up to 50% of required off-street parking spaces for single-family attached dwellings may be provided on one or more common parking lots within the planned development as long as each single-family lot contains one off-street parking space.**

**Findings:** The applicant has proposed that the homes will have minimum 2-car garages and another 2 spaces in front of each garage in the driveway for every lot within the development, therefore this criterion is satisfied.

**Drainage:**

**All drainage provisions shall be generally laid out in accordance with the requirements set forth in Chapter 18.775, and the criteria in the adopted 1981 master drainage plan;**

**Findings:** The applicant's engineer has prepared preliminary calculations which indicate that meeting storm water drainage standards is technically feasible, as it has been shown on the submitted preliminary plans. To ensure that standards for storm water drainage will be met, the applicant has been conditioned to comply with applicable City of Tigard and Clean Water Services storm water requirements.

**Floodplain dedication:**

**Where landfill and/or development is allowed within or adjacent to the 100-year floodplain, the City shall require consideration of the dedication of sufficient open land area for a greenway adjoining and within the floodplain. This area shall include portions of a suitable elevation for the construction of a pedestrian/bicycle pathway with the floodplain in accordance with the adopted pedestrian bicycle pathway plan.**

**Findings:** There are no areas within the 100-year floodplain on the site. Therefore, this standard is not applicable.

**Shared Open Space:**

**Requirements for shared open space:**

**Where the open space is designated on the plan as common open space the following applies:**

- **The open space shall be shown on the final plan and recorded with the Director; and**
- **The open space shall be conveyed in accordance with one of the following methods:**

**By dedication to the City as publicly-owned and maintained as open space. Open space proposed for dedication to the City must be acceptable to it with regard to the size, shape, location, improvement and budgetary and maintenance limitations;**

**By leasing or conveying title (including beneficial ownership) to a corporation, home association or other legal entity, with the City retaining the development rights to the**



property. The terms of such lease or other instrument of conveyance must include provisions suitable to the City Attorney for guaranteeing the following:

- The continued use of such land for the intended purposes;
- Continuity of property maintenance;
- When appropriate, the availability of funds required for such maintenance;
- Adequate insurance protection
- Recovery for loss sustained by casualty and condemnation or otherwise.

By any method which achieves the objectives set forth in Subsection 2 above of this section.

**Findings:** As a condition of approval, the applicant will be required to convey title of the proposed open space as a separate tract to a Homeowner's Association in accordance with the requirements of the Tigard Development Code and Clean Water Services requirements for buffers.

## **CHAPTER 18.370: SPECIAL ADJUSTMENTS**

**Adjustments to development standards within subdivisions (Chapter 18.430). The Director shall consider the application for adjustment at the same time he/she considers the preliminary plat. An adjustment may be approved, approved with conditions, or denied provided the Director finds:**

**Findings:** The applicant is requesting an adjustment to the street improvement standards on SW 74th Avenue and an adjustment to the cul-de-sac standards. On 74<sup>th</sup> Avenue, the applicant is requesting an adjustment to allow the sidewalk to be curb tight in order to reduce the amount of fill required in the drainageway area. The applicant has also requested that the cul-de-sac design standards be adjusted to allow 23 homes access to the cul-de-sac verses the allowed standard of 20 homes, and to allow a cul-de-sac longer than 200 feet. These adjustments are addressed below.

**There are special circumstances or conditions affecting the property, which are unusual and peculiar to the land as compared to other lands similarly situated;**

**Findings:** The applicant is requesting an adjustment to the 5-foot planter strip along 74<sup>th</sup> Avenue to reduce 1,100 additional square feet of impact to the drainageway and wetland area. The applicant proposes this curb tight sidewalk for the special circumstance where the development is required to cross the stream. Outside the resource area, the sidewalk will meet the required public street standards.

Due to the presence of the sensitive lands, the development width of the property makes a looped street unfeasible. Also, because of existing development patterns adjacent to the site, the cul-de-sac could not be extended to the site's east property line. The applicant was able to extend a new public street to the north property line for future connectivity. The length of the cul-de-sac is the primary reason to exceed the 20 home maximum standard on this private street. Because of the special circumstances affecting this property, this criterion has been satisfied.

**The adjustment is necessary for the proper design or function of the subdivision;**

**Findings:** The adjustment request for the curb tight sidewalk is necessary to reduce impacts to the

drainageway and wetlands. The adjustment for the cul-de-sac length is necessary to provide access to Lots 3-19 and to allow a turn around for emergency equipment and garbage trucks. The adjustment to allow more than 20 units to access the cul-de-sac is a result of both the length of the resulting cul-de-sac, and the desire to eliminate the need for a second redundant access serving three lots. Providing this second access would have reduced the amount of area available for buildings, with the result of eliminating the lots being served by it. Therefore, this criterion has been satisfied.

**The granting of the adjustment will not be detrimental to the public health, safety, and welfare or injurious to the rights of other owners of property; and**

**Findings:** The Fire District has reviewed the proposed street design and has provided no objections to these adjustments. There is no evidence that these adjustments will be detrimental to the health safety or welfare to other property owners surrounding the site.

**The adjustment is necessary for the preservation and enjoyment of a substantial property right because of an extraordinary hardship, which would result from strict compliance with the regulations of this title.**

**Findings:** Due to existing development patterns, the natural resources, and the shape of the site, the adjustment is necessary for the applicant to make use of substantial property rights. The applicant is proposing to build within the density prescribed for this site. The criteria for granting these adjustments to the street design, cul-de-sac length, and sidewalk standards have been satisfied.

## **CHAPTER 18.330: ZONE CHANGE:**

**A recommendation or a decision to approve, approve with conditions or to deny an application for a quasi-judicial zoning map amendment shall be based on all of the following standards:**

**Demonstration of compliance with all applicable comprehensive plan policies and designations;**

**Findings:** This application has been reviewed under the standards of the Tigard Development Code, which is implemented under the comprehensive plan. This criterion has been satisfied.

**Evidence of change in the neighborhood or community or a mistake or inconsistency in the comprehensive plan or zoning map as it relates to the property which is the subject of the development application.**

**Findings:** The applicant satisfies the criteria for a zone change to place the Planned Development Overlay zoning onto the property.

## **CHAPTER 18.430: SUBDIVISIONS**

**Preliminary Subdivision Plat Approval Criteria: 18.430.040**

**Approval criteria:**

**The approval Authority may approve, approve with conditions or deny a preliminary plat based on the following approval criteria:**

**The proposed preliminary plat complies with the applicable zoning ordinance and other applicable and regulations;**

**Findings:** As illustrated by this report, the proposed plat complies with all applicable ordinances and regulations.

**The proposed plat name is not duplicative or otherwise satisfies the provisions of ORS Chapter 92;**

**Findings:** As required, the applicant will provide an approved plat name reservation prior to final plat approval.

**The streets and roads are laid out so as to conform to the plats of subdivisions and maps of major partitions already approved for adjoining property as to width, general direction and in all other respects unless the City determines it is in the public interest to modify the street or road pattern; and**

**Findings:** As mentioned previously, site conditions and existing development limit the applicant to provide street stubs to the east and south, however, a street stub has been provided to the property to the north. The applicant is also proposing to extend 74<sup>th</sup> Avenue to the south. This criterion has been met. An explanation has been provided for all common improvements.

**Findings:** The applicant has provided an explanation for all common improvements. As required, the applicant will provide an approved plat name reservation prior to final plat approval.

## **CHAPTER 18.510: RESIDENTIAL ZONING DISTRICTS**

### **Residential Zoning District: Section 18.510.020**

**The R-4.5 zoning district is designated to accommodate detached single-family homes with or without accessory residential units at a minimum lot size of 7,500 square feet. Duplexes and attached single-family units are permitted conditionally. Some civic and institutional uses are also permitted conditionally.**

**Findings:** This Planned Development is permitted in this district as long as the applicant satisfies all applicable criteria.

**Development Standards: Section 18.510.050 States that Development standards in residential zoning districts are contained in Table 18.510.2:**

**Findings:** The proposed development is a Planned Development and is allowed to vary from the standards of the base zone. Therefore, the applicant has satisfied these criteria.

## **CHAPTER 18.705: ACCESS AND EGRESS**

**Minimum access requirements for residential use: Section 18.705.030H**

**Access Management (Section 18.705.030.H)**

**Section 18.705.030.H.1 states that an access report shall be submitted with all new development proposals which verifies design of driveways and streets are safe by meeting adequate stacking needs, sight distance and deceleration standards as set by ODOT, Washington County, the City and AASHTO.**

**Findings:** The applicant's engineer indicates that sight distance will be met. The engineer is required to provide a post-construction sight distance certificate to ensure that this standard is met.

**Section 18.705.030.H.2 states that driveways shall not be permitted to be placed in the influence area of collector or arterial street intersections. Influence area of intersections is that area where queues of traffic commonly form on approach to an intersection. The minimum driveway setback from a collector or arterial street intersection shall be 150 feet, measured from the right-of-way line of the intersecting street to the throat of the proposed driveway. The setback may be greater depending upon the influence area, as determined from City Engineer review of a traffic impact report submitted by the applicant's traffic engineer. In a case where a project has less than 150 feet of street frontage, the applicant must explore any option for shared access with the adjacent parcel. If shared access is not possible or practical, the driveway shall be placed as far from the intersection as possible.**

**Findings:** The proposed new intersection of Street 'A' and 74<sup>th</sup> Avenue, a Neighborhood Route, is not within the influence area of Taylor Ferry Road, a collector street. This criterion has been met.

**Section 18.705.030.H.3 and 4 states that the minimum spacing of driveways and streets along a collector shall be 200 feet. The minimum spacing of driveways and streets along an arterial shall be 600 feet. The minimum spacing of local streets along a local street shall be 125 feet.**

**Findings:** The proposed intersection is over 280 feet away from the intersection of 74<sup>th</sup> Avenue and Barbara Lane. This standard has been met.

**Vehicular access and egress for single-family, duplex or attached single-family dwelling units on individual lots and multi-family residential uses shall not be less than as provided in Table 18.705.1 and Table 18.705.2;**

**Findings:** As a condition of approval, the applicant will be required to provide a minimum 10-foot wide paved accessway for each single-family lot.

**Vehicular access to multi-family structures shall be brought to within 50 feet of the ground floor entrance or the ground floor landing of a stairway, ramp, or elevator leading to the dwelling units.**

**Findings:** Since this is a proposal for a single-family development, this standard does not apply.

**Private residential access drives shall be provided and maintained in accordance with the provisions of the Uniform Fire Code.**

**Findings:** Individual homeowners will maintain the access drives once the property is developed. The

Fire District has already reviewed and provided comments on the proposed development, therefore this criterion has been satisfied.

**Access drives in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus by one of the following:**

- **A circular, paved surface having a minimum turn radius measured from center point to outside edge of 35 feet;**
- **A hammerhead-configured, paved surface with each leg of the hammerhead having a minimum depth of 40 feet and a minimum width of 20 feet;**
- **The maximum cross slope of a required turnaround is 5%.**

**Findings:** Since there are no access drives that exceed 150 feet in length, this criterion does not apply.

**Vehicle turnouts (providing a minimum total driveway width of 24 feet for a distance of at least 30 feet), may be required so as to reduce the need for excessive vehicular backing motions in situations where two vehicles traveling in opposite directions meet on driveways in the excess of 200 feet in length.**

**Findings:** There are no access drives that exceed 200 feet in length, therefore this criterion does not apply.

**Where permitted, minimum width for driveway approaches to arterials or collector streets shall no less than 20 feet so as to avoid traffic turning from the street having to wait for traffic exiting the site.**

**Findings:** This site is not adjacent to a collector or arterial, therefore this standard does not apply.

**To provide for increased traffic movement on congested streets and to eliminate turning movements problems, the Director may restrict the location of driveways on streets and require the location of driveways be placed on adjacent streets, upon the finding that the proposed access would cause or increase existing hazardous conditions to exist which would constitute a clear and present danger to the public health, safety, and general welfare.**

**Findings:** The proposed development can comply with all applicable requirements of Chapter 18.705. As a condition of approval, the applicant will provide joint access with an easement or tract to Lots 28 and 29. In addition, the applicant will be conditioned to demonstrate that all lots can be accessed by a minimum 10-foot wide paved accessway.

## **CHAPTER 18.715: DENSITY COMPUTATIONS**

**Density Calculation: 18.715.020**

**Definition of net development area.**

**Net development area, in acres, shall be determined by subtracting the following land area(s) from the gross acres, which is all of the land included in the legal description of the property to be developed:**

- All sensitive land areas: a. Land within the 100-year floodplain; b. Land or slopes exceeding 25%; c. Drainage ways; and d. Wetlands.
- All land dedicated to the public for park purposes;
- All land dedicated for public rights-of-way. When actual information is not available, the following formulas may be used: Single-family development: allocate 20% of gross acreage; Multi-family development: allocate 15% of gross acreage.
- All land proposed for private streets; and
- A lot of at least the size required by the applicable base zoning district, if an existing dwelling is to remain on the site.

**Calculating maximum number of residential units.**

To calculate the maximum number of residential units per net acre, divide the number of square feet in the net acres by the minimum number of square feet required for each lot in the applicable zoning district.

**Findings:** The density calculations for the site are as follows:

Gross lot area:	407,721 square feet
Public Street dedication	17, 828 square feet
Private Street dedication	22,670 square feet
Drainageway	70,862 square feet
Steep Slopes	107,556 square feet
<u>Wetlands (contained in drainageway)</u>	
Net Developable Area:	188,805 square feet

Number of Lots Allowed  
in Net Developable Area: 25 Lots

#### **Residential Density Transfer**

Rules governing residential density transfer. The units per acre calculated by subtracting land areas listed in Section 18.715.020 A. 1a - c from the gross acres may be transferred to the remaining buildable land areas subject to the following limitations:

1. The number of units which can be transferred is limited to the number of units which would have been allowed on 25 percent of the unbuildable area if not for these regulations; and
2. The total number of units per site does not exceed 125 percent of the maximum number of units per gross acre permitted for the applicable comprehensive plan designation.

**Findings:** According to the rules of density transfer, the applicant is able to utilize 25% of the drainageway and steep slopes as part of the net developable area. To calculate the maximum allowed density, the net developable area is divided by the minimum allowed square footage of the site's zone.

Drainageway and steep slopes = 178,418. 25% of this constrained area = 44,604  
Net Developable area = 178,418+44,604 = 233,409 square feet

R-4.5 Zone:

233,409 (net developable area)/7,500 (minimum allowed s.f. for this zone) = 31 dwelling units

The total number of units allowed is:  
 $125\% \text{ (gross acreage)} \times 25 \text{ Lots} = 31 \text{ Lots}$

Therefore, the proposed 29 dwelling units do not exceed the maximum density of the net developable area. This criterion has been met.

**Calculating minimum number of residential units.**

As required by Section 18.510.040, the minimum number of residential units per net acre shall be calculated by multiplying the maximum number of units determined in the Subsection B above by 80% (0.8).

**Findings:** The required minimum density is calculated as follows:

$25 \text{ Lots} \times 0.80 = 20 \text{ Lots}$

The applicant has met this standard.

## **CHAPTER 18.725: ENVIRONMENTAL PERFORMANCE STANDARDS**

**Noise.** For the purposes of noise regulation, the provisions of Sections 7.41.130 through 7.40.210. Of the Tigard Municipal Code shall apply.

**Visible Emissions.** Within the commercial zoning districts and the industrial park (IP) zoning district, there shall be no use, operation or activity which results in a stack or other pointsource emission, other than an emission from space heating, or the emission of pure uncombined water (steam) which is visible from a property line. Department of Environmental Quality (DEQ) rules for visible emissions (340-21-015 and 340-28-070) apply.

**Vibration.** No vibration other than that caused by highway vehicles, trains and aircraft is permitted in any given zoning district which is discernible without instruments at the property line of the use concerned.

**Odors.** The emissions of odorous gases or other matter in such quantities as to be readily detectable at any point beyond the property line of the use creating the odors is prohibited. DEQ rules for odors (340-028-090) apply.

**Glare and heat.** No direct or sky reflected glare, whether from floodlights or from high temperature processes such as combustion or welding, which is visible at the lot line shall be permitted, and 1) there shall be no emission or transmission of heat or heated air which is disconcerting at the lot line of the source; and 2) these regulations shall not apply to signs or floodlights in parking areas or construction equipment at the time of construction or excavation work otherwise permitted by this title.

**Insects and rodents. All materials including wastes shall be stored and all grounds shall be maintained in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard.**

**Findings:** Adherence to these standards will be assured through the on-going review of the City of Tigard Code Enforcement Officer after individual lots are purchased by homeowners. **A condition will be imposed to require ongoing compliance with this standard from the applicant and future owners of lots. With this condition, these standards have been met.**

## **CHAPTER 18.745: LANDSCAPING AND SCREENING**

**Establishes standards for landscaping, buffering and screening to enhance the aesthetic environmental quality of the City.**

**Findings:** There are no landscaping standards that apply to the R-4.5 zone. However, the open space and drainage tracts constitute approximately 44% of the site area. Additional landscaping will be planted within lots by individual homeowners.

**Section 18.745.040. states that all development projects fronting on public street, private street, or a private driveway more than 100 feet in length after the adoption of this title shall be required to plant street trees in accordance with the standards in Section 18.745.040C.**

**Findings:** As a condition of approval, the applicant will be required to submit a revised street tree plan that identifies an alternative tree species for either the public or private street to vary the streetscape. Individual lot owners will not be issued a certification of occupancy until the landscaping requirements of 18.745.040 have been met. The applicant agrees that varying the street trees is feasible and that this condition can be met.

### **Buffering and Screening - Section 18.745.050**

**Buffering and Screening is required to reduce the impacts on adjacent uses which are of a different type in accordance with the matrices in this chapter (Tables 18.745.1 and 18.745.2).**

**Findings:** The applicant has been conditioned to comply with Landscaping and Screening requirements of Chapter 18.745. However, single-family developments are adjacent to the subject site so there are no buffering and screening requirements for this project. During the application appeal process, the applicant proposed the installation of a Leyland cypress hedge along the rear of lots 1-12 for additional privacy screening for existing abutting homes. This is memorialized as a condition of approval.

## **CHAPTER 18.755: MIXED SOLID WASTE AND RECYCLABLE STORAGE**

**Findings:** Waste Management, the correct service provider has reviewed the applicant's proposal and has found it to be acceptable for the removal of solid waste and recyclables.



## **CHAPTER 18.765: OFF-STREET PARKING AND LOADING REQUIREMENTS**

**This chapter is applicable for development projects when there is new construction expansion of existing use, or change of use in accordance with Section 18.765.070 Minimum and Maximum Off-Street Parking Requirements.**

**Findings:** As mentioned previously, the applicant has proposed 2-car garages and another 2 spaces in front of each garage for every lot within the development, therefore this criterion is satisfied. To ensure that the development complies with this standard, the developer has been conditioned to submit materials demonstrating that at least one off-street parking space, which meets minimum dimensional requirements and setback requirements as specified in Title 18, will be provided on-site for each new home.

## **CHAPTER 18.775: SENSITIVE LANDS**

**Jurisdictional wetlands. Landform alterations or developments which are only within wetland areas that meet the jurisdictional requirements and permit criteria of the U.S. Army Corps of Engineers, Division of State Lands, CWS, and/or other federal, state, or regional agencies, and are not designed as significant wetlands on the City of Tigard. Wetland and Streams Corridors Map., do not require a sensitive lands permit. The City shall require that all necessary permits from other agencies are obtained. All other applicable City requirements must be satisfied, including sensitive land permits for areas within the 100-year floodplain, slopes of 25% or greater or unstable ground, drainageways, and wetlands which are not under state or federal jurisdiction.**

**Findings:** The wetlands on this site are not designated as significant by the City. However, as a condition of approval, the applicant will be required to obtain all the necessary permits from the Army Corp, Division of State Lands, and Clean Water Services.

**Steep slopes. The appropriate approval authority shall approve, approve with conditions or deny an application request for a sensitive lands permit on slopes of 25% or greater or unstable ground based upon findings that all of the following criteria have been satisfied:**

- 1. The extent and nature of the proposed land form alteration or development will not create site disturbances to an extent greater than that required for the use;**
- 2. The proposed land form alteration or development will not result in erosion, stream sedimentation, ground instability, or other adverse on-site and off-site effects or hazards to life or property;**
- 3. The structures are appropriately sited and designed to ensure structural stability and proper drainage of foundation and crawl space areas for development with any of the following soil conditions: wet/high water table; high shrink-swell capability; compressible/organic; and shallow depth-to-bedrock; and**
- 4. Where natural vegetation has been removed due to land form alteration or development, the areas not covered by structures or impervious surfaces will be replanted to prevent erosion in accordance with Chapter 18.745, Landscaping and Screening.**

**Findings:** As mentioned previously, the applicant has attempted to reduce the area that the development

impacts the steep slopes and natural areas of the site. An erosion control and grading plan will be required during the engineering approval process to ensure sensitive areas will not be impacted by sedimentation or erosion, as well as to prevent off-site impacts. The erosion control plan will ensure that areas where landform alteration takes place will be replanted. The applicant has also submitted a geotech report, which indicates which areas should and should not be developed. As a Condition of Approval, the applicant will be required to undertake further geotechnical investigations in for Lots 13-15, 22 and 23. The applicant is also conditioned to have the geotechnical engineer review the proposed building placement grading plans prior to final plat approval.

**Within drainageways. The appropriate approval authority shall approve, approve with conditions or deny an application request for a sensitive land permit within drainageways based upon findings that all of the following criteria have been satisfied:**

- 1. The extent and nature of the proposed land form alteration or development will not create site disturbances to an extent greater than that required for the use;**

**Findings:** The applicant has proposed to extend 74<sup>th</sup> Avenue to meet the objectives of the City's Transportation Plan and to serve two lots in the southern portion of the site. The applicant has proposed a curb tight sidewalk to minimize the amount of fill in the stream corridor. The extent of the disturbance is not greater than the proposed use, therefore this criterion has been met.

- 2. The proposed land form alteration or development will not result in erosion, stream sedimentation, ground instability, or other adverse on-site and off-site effects or hazards to life or property;**

**Findings:** An erosion control and grading plan will be required during the engineering approval process to ensure sensitive areas will not be impacted by sedimentation or erosion, as well as to prevent off-site impacts. The applicant is also conditioned to have the geotechnical engineer review the proposed building placement prior to City approval of construction plans.

- 3. The water flow capacity of the drainageway is not decreased;**

**Findings:** The applicant has submitted a stormwater report that includes using an oversized box culvert to ensure that upstream properties are not affected by the development.

- 4. Where natural vegetation has been removed due to land form alteration or development, the areas not covered by structures or impervious surfaces will be replanted to prevent erosion in accordance with Chapter 18.745, Landscaping and Screening;**

**Findings:** The applicant has been conditioned to submit an erosion control and grading plan which will require areas to be replanted prior issuance of final building permits. In addition, the applicant is required to replant per the requirements of the Clean Water Services letter.

- 5. The drainageway will be replaced by a public facility of adequate size to accommodate maximum flow in accordance with the adopted 1981 Master Drainage Plan;**

**Findings:** The 1981 Master Drainage Plan does not identify any public facilities for this portion of Ash

Creek.

6. **The necessary U.S. Army Corps of Engineer and State of Oregon Land Board, Division of State Lands, and CWS approvals shall be obtained;**

**Findings:** The applicant has submitted approvals from Clean Water Services. As a condition of approval, the applicant will be required to show approvals from the Corps of Engineers and the Division of State Lands.

7. **Where land form alterations and/or development are allowed within and adjacent to the 100-year floodplain, the City shall require the consideration of dedication of sufficient open land area within and adjacent to the floodplain in accordance with the Comprehensive Plan. This area shall include portions of a suitable elevation for the construction of a pedestrian/bicycle pathway within the floodplain in accordance with the adopted pedestrian bicycle pathway plan.**

**Findings:** There is no 100-year floodplain within the proposed development site, therefore this standard is inapplicable. In order to receive a sensitive lands permit, the applicant has been conditioned to meet the following:

- Prior to the issuance of final occupancy on any building, the applicant must provide City staff with a letter from Clean Water Services that indicates compliance with the approved service provider letter.
- Prior to any site work, the applicant shall provide evidence of all necessary approvals from Army Corps of Engineers and the Division of State Lands.
- Prior to any site work, the drainage tract must be clearly identified in the field with permanent fencing so as to insure no grading or material is placed in the area. Any fencing that is damaged during construction must be replaced prior to final building inspection.
- Prior to final plat approval submit and receive approval for an erosion control and grading plan for alteration on slopes exceeding 25%.
- Re-plant any area where vegetation has been removed as a result of grading in conformance with the Clean Water Services Standards as set forth in the site assessment file, prior to obtaining permits.
- Prior to commencing on-site improvements, the applicant shall have the geotech engineer review and approve the construction plans for the City's review and approval.

## **CHAPTER 18.790: TREE REMOVAL**

**A tree plan for the planting, removal and protection of trees prepared by a certified arborist shall be provided with a site development review application. The tree plan shall include identification of all existing trees, identification of a program to save existing trees or mitigate tree removal over 12 inches in caliper, which trees are to be removed, protection program defining standards and methods that will be used by the applicant to protect trees during and after construction.**

**Findings:** CDC 18.790.050 provides exemptions from the requirement to obtain tree removal permits. One of those exemptions is stated in CDC 18.790.050(D)(4). The City Council has interpreted this exemption as being applicable to the requirement to develop a tree plan and to provide mitigation for trees

removed at the time of development imposed by CDC 18.790.030. This interpretation is based on the Council's understanding of the intent of the exemption. The exemption was intended to recognize that when trees have been planted or maintained with the goal that they ultimately be used for timber or pulp, it is reasonable to allow the property owner to harvest them without requiring mitigation. Allowing the harvest of trees intended for timber or pulp without requiring a tree plan or mitigation is a good policy because it respects the reasonable expectations of property owners. Furthermore, if the exemption did not apply at the time of development, property owners with tax-deferred timber property would cut all the timber on the property so that they could develop in the future without being required to mitigate. This is not desirable because it would lead to widespread harvesting of trees that have environmental benefits and that contribute to the character of City of Tigard.

The interpretation is also based on the language of CDC 18.790.050. That section requires tree removal permits only for trees on sensitive lands. CDC 18.790.050(A) The exemption only applies to trees that are not on sensitive lands. CDC 18.790.050(D)(4). If the exemption in CDC 18.790.050(D)(4) applied only to the requirement of CDC 18.790.050 and not to the tree plan and mitigation requirement of CDC 18.790.030, it would have been totally unnecessary because it would not exempt anything – it doesn't apply to sensitive lands and the permit requirement only applies to sensitive lands. Separate provisions in laws or ordinances should be interpreted as having separate effects. The only way to give separate effect to CDC 18.790.050(D)(4) is to apply it to the tree plan and mitigation requirement of CDC 18.790.030.

As applied to this application, some of the property is considered to be a sensitive land, so a tree plan is required for that area. The applicant has provided a tree plan for the entire area, and so has complied with the requirement. The applicant does not propose removal of more than 25 percent of trees over 12 caliper inches from the sensitive land area, so no mitigation is required under 18.790.030.

As mentioned previously, this site is in tax-deferred timber property status, therefore the applicant may harvest all the trees outside of the sensitive land areas without having to comply with the mitigation requirements of this Chapter. The applicant's tree removal plan indicates that approximately 74 trees within the sensitive land areas will be removed. During the application appeal process, the applicant proposed retaining additional trees within the developable portion of the site. A 15' wide area in the rear of the perimeter of the northern and eastern lots is proposed to retain all healthy and viable trees, subject to a certified arborists review and determination. To ensure that the trees are preserved according to the tree removal plan, the following conditions will apply:

- The applicant shall submit an arborist report with tree protection recommendations, and shall provide the City Arborist with a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving.
- Prior to site work, the applicant shall submit a complete set of construction documents with the tree locations for the City Arborist review. The construction documents shall show the open space tract trees protected (with the exception of trees that require removal for utility construction) and a 15' wide area of trees protected along the rear of the perimeter lots (with the exception of any trees that are dead, dying, diseased, or deemed dangerous).
- The applicant shall notify the City Arborist when tree protection measures are in place so that he may verify that the measures will function properly prior to construction.
- The applicant shall submit CC&R's that additionally establish restrictions regarding the removal of trees greater than 12 inches in diameter from any of the lots or tracts following completion of the subdivision improvements. Trees may only be allowed to be removed subject to a certified arborist's finding that the trees are dead, or in severe decline.

## CHAPTER 18.795: VISUAL CLEARANCE AREAS

Clear vision area shall be maintained on the corners of all property adjacent to intersection of two streets, a street and a railroad, or a driveway providing access to a public or private street. A clear vision area shall contain no vehicle hedge, planting, fence, wall structure, or temporary or permanent obstruction exceeding three (3) feet in height, measured from the top of the curb, or where no curb exists, from the street center grade, except the trees exceeding this height may be located in this area, provided all branches below eight feet are removed. For arterial streets the visual clearance shall not be less than 35 feet on each side of the intersection.

**Findings:** The applicant has illustrated clear vision areas at the street intersections and has indicated that no obstructions will be placed in those areas. Compliance with vision clearance requirements will be confirmed through the building permit process for all homes to be constructed within the development. This standard has been met.

## CHAPTER 18.390: DECISION MAKING PROCEDURES

### G. Impact Study: Section 18.390.040.B.e

Requires that the applicant shall include an impact study. The study shall address, as a minimum, the transportation system, including bikeways, the drainage system, the parks system, the water system, the sewer system, and the noise impacts of the development. For each public facility system and type of impact of the development on the public at large, public facilities systems, and affected private property users. In situations where the Community Development Code requires the dedication of real property interests, the applicant shall either specifically concur with the dedication of real property interest, or provide evidence which supports the conclusion that the real property dedication requirement is not roughly proportional to the projected impacts of the development.

**Findings:** The applicant submitted an impact study, satisfying the required elements above.

### Rough Proportionality Analysis

**Findings:** The Analysis has been calculated as follows:

Full Impact of the Development=	
73,370 (TIF of \$2,530 x 29 DU) / 0.32 (TIF's Coverage Citywide) =	\$229,281
Less TIF Assessment= (TIF of \$2,530 x 29 DU)=	-\$73,370
Less Mitigated costs of 74 <sup>th</sup> Avenue Improvement	<u>-\$250,000</u>
Estimate of Unmitigated Impacts	-\$94,089

Although the costs of the improvements is greater than the level of impact, the improvements have been proposed by the applicant. The required dedication of right-of-way is clearly proportionate to the impact of the creation of the 29 lots. Therefore, the applicant has satisfied this criterion.

## **CHAPTER 18.810: STREET AND UTILITY IMPROVEMENTS STANDARDS**

**Chapter 18.810 provides construction standards for the implementation of public and private facilities and utilities such as streets, sewers, and drainage. The applicable standards are addressed below:**

### **Streets:**

#### **Improvements:**

**Section 18.810.030.A.1 states that streets within a development and streets adjacent shall be improved in accordance with the TDC standards.**

**Section 18.810.030.A.2 states that any new street or additional street width planned as a portion of an existing street shall be dedicated and improved in accordance with the TDC.**

**Minimum Rights-of-Way and Street Widths: Section 18.810.030(E) requires a neighborhood route street to have a 54-foot right-of-way width and a 32-foot paved section. Other improvements required may include on-street parking, sidewalks and bikeways, underground utilities, street lighting, storm drainage, and street trees.**

**Findings:** Due to the unimproved nature of 74<sup>th</sup> Avenue, the applicant met with representatives from the City of Tigard Engineering Department and the City of Tualatin Water District (who has a water transmission line within the 74<sup>th</sup> Avenue right of way) to discuss several issues regarding the extension of this street. All parties agreed that the applicant should be permitted to construct 74<sup>th</sup> Avenue with a steeper grade in order to minimize the amount of fill over the water line and in the wetland area. Therefore, the applicant requested an adjustment to the grade standard. However, since the proposed street grade does not exceed 15% for over 250 feet, an adjustment is not required.

The applicant also requested the speed limit be reduced to 15 miles per hour in the section where the 74<sup>th</sup> avenue crossing will occur. This speed limit was accepted by the City of Tigard Engineer. The City of Tigard standards are met by a 15 mile per hour vertical curve design, to a "K value" of greater than 5 (AASHTO).

The applicant also requested an adjustment to the sidewalk standards at the stream crossing location on 74<sup>th</sup> Avenue. By moving the sidewalk to the curb line, five fewer feet of width into the stream corridor is avoided. Staff has recommended approval the sidewalk adjustment.

**Future Street Plan and Extension of Streets: Section 18.810.030(F) states that a future street plan shall be filed which shows the pattern of existing and proposed future streets from the boundaries of the proposed land division. This section also states that where it is necessary to give access or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary lines of the tract to be developed and a barricade shall be constructed at the end of the street. These street stubs to adjoining properties are not considered to be cul-de-sacs since they are intended to continue as through streets at such time as the adjoining property is developed. A barricade shall be constructed at the end of the street by the property owners which shall not be removed until authorized by the City Engineer, the cost of which shall be included in the street construction cost. Temporary hammerhead turnouts or temporary cul-de-sac bulbs shall be constructed for stub streets in**

excess of 150 feet in length.

**Findings:** The applicant has proposed to stub the new public street to the parcel to the north. As mentioned previously, site conditions and existing development limit the applicant to provide street stubs to the east and south. The applicant is also proposing to extend 74<sup>th</sup> Avenue to the south. This criterion has been met.

**Street Alignment and Connections:** Section 18.810.030. (G) states that staggering of streets making the 1<sup>st</sup> intersections at collectors and arterials shall not be designed so that jogs of less than 300 feet on such streets are created, as measured from the centerline of such street. Spacing between local street intersections shall have a minimum separations of 125 feet. All local streets which abut a development site shall be extended within the site to provide through circulation when not precluded by environmental or topographical constraints, existing development patterns or strict adherence to other standards in this code. A street connection or extension is precluded when it is not possible to redesign, or reconfigure the constraints, the mere presence of a constraint is not sufficient to show that a street connection is not possible. The applicant must show why the constraint precludes some reasonable street connection.

**Findings:** As mentioned previously, the drainageway precludes extension of an interior public or private street to the south. No street connections are possible to the east due to the existing development patterns adjacent to the site. This criterion has been satisfied.

**Cul-de-sacs:** 18.810.030.K states that a cul-de-sac shall be no more than 200 feet long, shall not provide access to greater than 20 dwelling units, and shall only be used when environmental or topographical constraints, existing development pattern, or strict adherence to other standards in this code preclude street extension and through circulation:

- All cul-de-sacs shall terminate with a turnaround. Use of turnaround configurations other than circular, shall be approved by the City Engineer; and
- The length of the cul-de-sac shall be measured along the centerline of the roadway from the near side of the intersecting street to the farthest point of the cul-de-sac.
- If a cul-de-sac is more than 300 feet long, a lighted direct pathway to an adjacent street may be required to be provided and dedicated to the City.

**Findings:** The applicant has requested an adjustment to allow a private street cul-de-sac of approximately 500 feet in length. The site is over 967 feet deep and the stream to the south makes it too narrow to accommodate a looped street. In addition, steep slopes, the creek and existing development preclude any connections to the south or east. The applicant has demonstrated that there are no practicable alternatives to provide reasonable and efficient access to the entire property. This adjustment is justified by the shape of the property, natural features, and pre-existing development..

**Grades and Curves:** Section 18.810.030.M states that grades shall not exceed ten percent on arterials, 12% on collectors streets, or 12% on any other street (except that local or residential access streets may have segments with grades up to 15% for distances of no greater than 250 feet) and :

**Findings:** Staff review revealed that the proposed street grade does not exceed 15% for over 250 feet.

Therefore, the applicant's request for an adjustment is not required.

**Private Streets:** Section 18.810.030.S states that design standards for private streets shall be established by the City Engineer. The City shall require legal assurances for the continued maintenance of private streets, such as recorded maintenance agreement. Private streets serving more than six dwelling units are permitted only within planned developments, mobile home parks and multi-family residential developments.

**Findings:** The applicant is proposing to serve a total of 23 lots (lots 1-23) with the proposed private street. Since this development is proposed as a planned development, a private street is acceptable.

**Block Designs –** Section 18.810.030.S states that the length, width, and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control and safety of street traffic and recognition of limitations and opportunities of topography.

**Block Sizes:** Section 18.810.040.B.1 states that the perimeter of blocks formed by streets shall not exceed 1,800 feet measured along the right-of-way line except:

- Where street location is precluded by natural topography, wetlands or other bodies of water or pre-existing development or;
- For blocks adjacent to arterial streets, limited access highways, major collectors or railroads.
- For non-residential blocks in which internal public circulation provides equivalent access.

**Findings:** As mentioned previously, the existing development, steep slopes, and stream corridor do not allow connections other than the proposed connection to the north. The proposed street stub to the north will eventually provide a block measuring approximately 1,250 feet. This criterion has been met.

Section 18.810.040.B.2 also states that bicycle and pedestrian connections on public easements or right-of-ways shall be provided when full street connection is not possible. Spacing between connections shall be no more than 330 feet, except where precluded by environmental or topographical constraints, existing development patterns, or strict adherence to other standards in the code.

**Findings:** The applicant proposes to serve the site with a sidewalk on one side of the private street and a public street stub with sidewalks on both sides to the north property boundary. There are no opportunities for bicycle and/or pedestrian connections to the east or south because of topography and natural features. Therefore, this standard has been satisfied.

**Lots – Size and Shape:** Section 18.810.060(A) prohibits lot depth from being more than 2.5 times the average lot width, unless the parcel is less than 1.5 times the minimum lot size of the applicable zoning district.

**Findings:** Only one of the proposed lots (#13) exceed 1.5 times the minimum lot size. This lot is 69 feet in average lot width and 170 feet in lot depth. Two and a half times the proposed lot width is 172.5 feet. Since 170 feet is less than 2.5 times the lot width, this criterion has been satisfied.



**Lot Frontage:** Section 18.810.060(B) requires that lots have at least 25 feet frontage on public or private streets, other than an alley. In the case of a land partition, 18.420.050.A.4c applies, which requires a parcel to either have a minimum 15-foot frontage or a minimum 15-foot wide recorded access easement. In cases where the lot is for an attached single-family dwelling unit, the frontage shall be at least 15 feet.

**Findings:** Lots 9, 11, 12, 1 and 29 do not have 25 feet of frontage on a public or private street. Therefore the applicant will be conditioned to revise the plat to accommodate a minimum of 25 feet of frontage for all lots within the development. Since there is greater than 25 feet of average lot frontage available for the lots along the proposed streets, it is feasible to modify the final plat to meet this condition.

**Sidewalks:** Section 18.810.070.A requires that sidewalks be constructed to meet City design standards and be located on both sides of arterial, collector and local residential streets.

**Findings:** The applicant is proposing to construct sidewalks with other street improvements. This criterion has been satisfied.

**Sanitary Sewers:**

**Sewers Required:** Section 18.810.090.A requires that sanitary sewer be installed to serve each new development and to connect developments to exiting mains in accordance with the provisions set forth in Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Services in 1996 and including any future revisions or amendments) and the adopted policies of the comprehensive plan.

**Over-sizing:** Section 18.810.090.C states that proposed sewer systems shall include consideration of additional development within the area as projected by the Comprehensive Plan.

**Findings:** There is an existing sewer manhole in 74<sup>th</sup> Avenue. The applicant is proposing to extend the 8 inch line north in 74<sup>th</sup> Avenue and then east in the new public and private streets to serve all lots. As mentioned previously, the applicant is proposing to stub a line to the north for extension with future street improvements.

**Storm Drainage:**

**General Provisions:** Section 18.810.100.A states requires developers to make adequate provisions for storm water and flood water runoff.

**Accommodation of Upstream Drainage:** Section 18.810.100C states that a culvert or other drainage facility shall be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the development. The City Engineer shall approve the necessary size of the facility, based on the provisions of Design and Construction Standards for Sanitary and Surface Water Management (as adopted by the Clean Water Services in 2000 and including any future revisions or amendments).

**Findings:** The applicant's engineer has done preliminary calculations to size the new box culvert under 74<sup>th</sup> Avenue so that it accommodates upstream drainage. The 5-foot by 10-foot box culvert has been slightly oversized for easier fish passage. The applicant has also proposed to protect the condition of the existing creek by moving the development away from the sensitive area boundary. Therefore, in

accordance with City and Clean Water Services standards, the capacity of the existing drainageway will not be impacted by the proposed development.

**Effect on Downstream Drainage:** Section 18.810.100.D states that where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the Director and Engineer shall withhold approval of the development until provisions have been made for improvement of the potential condition of the facility. Section 18.810.100.D also states that where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the Director and Engineer shall withhold approval of the development until provisions have been made for storage of additional runoff caused by the development in accordance with the Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Service in 2000 and including any future revisions or amendments).

**Findings:** The site generally slopes towards Ash Creek. The applicant has proposed a storm system in the new public and private streets, including the in the street stub to the north property. The storm system is proposed to outlet into a pond that will provide water quality and quantity measures before it is discharged into Ash Creek, as required by Clean Water Services. As required, the applicant will provide access to the pond for maintenance. In addition the applicant has proposed to construct an oversized culvert under 74<sup>th</sup> Avenue to accommodate the Ash Creek Crossing. With these improvements there is sufficient detention capacity to meet the Clean Water Services standards.

**Bikeways and Pedestrian Pathways:**

**Bikeway Extension:** Section 18.810.110.A states that developments adjoining proposed bikeways identified on the City's adopted pedestrian/bikeway plan shall include provisions for the future extension of such bikeways through the dedication of easements or right-of-way.

**Findings:** 74<sup>th</sup> Avenue is not classified as a bike facility, therefore this criterion is inapplicable.

**Cost of Construction:** Section 18.810.110B states that development permits issues for planned unit developments, conditional use permits, subdivisions, and other developments which will principally benefit from such bikeways shall be conditioned to include the cost of construction of bikeway improvements

**Findings:** This standard is not applicable to this proposal.

**Minimum Width:** Section 18.810.110.C states that the minimum width for bikeways within the roadway is five feet per bicycle travel lane. Minimum width for two-way bikeways separated from the road is eight feet.

**Findings:** This standard is not applicable to this proposal.

**Utilities:**

Section 18.810.120 states that all utility lines, but not limited to those required for electric communication, lighting and cable television services and related facilities shall be placed underground, except for surface mounted transformers, surface mounted connection boxes and meter cabinets which may be placed above ground, temporary utility service facilities during construction, high capacity electric lines operating at 50,000 volts or above, and :

- The developer shall make all necessary arrangements with the serving utility to provide the underground services;
- The City reserves the right to approve location of all surface mounted facilities;
- All underground utilities, including sanitary sewers and storm drains installed in streets by the developer, shall be constructed prior to the surfacing of the streets; and
- Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

**Exception to Under-Grounding Requirement:** Section 18.810.120C states that a developer shall pay a fee in-lieu of under-grounding costs when the development is proposed to take place on a street where existing utilities which are not underground will serve the development and the approval authority determines that the cost and technical difficulty of under-grounding the utilities outweighs the benefit of under-grounding in conjunction with the development. The determination shall be on a case-by-case basis. The most common, but not the only, such situation is a short frontage development for which under-grounding would result in the placement of additional poles, rather than the removal of above-ground utilities facilities. An applicant for a development which is served by utilities which are not underground and which are located across a public right-of-way from the applicant's property shall pay a fee in-lieu of under-grounding.

**Findings:** All newly constructed utilities are to be placed underground. There are existing overhead lines along the frontage of SW 74<sup>th</sup> Avenue. The applicant shall either place these utilities underground or pay the fee in lieu. If the fee in-lieu is proposed by the applicant, it is equal to \$27.50 per lineal foot of street frontage that contains the overhead lines. The frontage along the site is 421 lineal feet; therefore the fee would be \$11,578.

## **CONDITIONS OF APPROVAL:**

**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO COMMENCING ANY ON-SITE IMPROVEMENTS,  
INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES:**

**Submit to the Planning Department (Morgan Tracy, 639-4171, Ext. 2428) for review and approval:**

1. Prior to site work, the applicant shall submit an arborist report with tree protection recommendations, and shall provide the City Arborist with a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving.
2. Prior to site work, the applicant shall submit a complete set of construction documents with the tree locations for the City Arborists review. The applicant will not cut any healthy trees within the designated open space tract. Furthermore, the applicant shall not cut any healthy trees in the tree preservation areas of Lots 1-18, which shall be defined as the area at least 15 from the rear of the building footprints. However, if an arborist determines that trees in these areas are dead, diseased, or pose a safety hazard, then the applicant shall remove affected trees from those areas.
3. Prior to site work, the applicant shall notify the City Arborist at least 48 hours prior to commencing construction when the tree protection measures are in place so that he may verify

that the measures will function properly.

4. Prior to site work, the applicant shall provide evidence of all necessary approvals for work within the wetlands from US Army Corps of Engineers and the Division of State Lands.
5. Prior to site work, the drainage tract must be clearly identified in the field with permanent (preferably with minimum 4-foot-tall black chainlink) fencing so as to insure no grading or material is placed in this area. Any fencing that is damaged during construction must be replaced prior to final building inspection. If the damage is such that it will no longer effectively identify the tract, it shall be replaced/reinstalled immediately.
6. Prior to site work, a signed approval shall be included with the City's construction drawing packet.

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

7. Prior to approval of construction plans, the applicant shall "pothole" the City of Tualatin's main water transmission line to determine the exact location and condition of the pipe. The applicant shall notify the City of Tigard and the City of Tualatin 48 hours prior to the pothole inspections and when any construction activity will impact the pipe (such as placement of fill and excavation in the immediate vicinity) so that a representative from both the Cities of Tualatin and Tigard can be present.
8. Prior to commencing onsite improvements, a Public Facility Improvement (PFI) permit is required for this project to cover all infrastructure and any other work in the public right-of-way. Eight (8) sets of detailed public improvement plans shall be submitted for review to the Engineering Department. NOTE: these plans are in addition to any other drawings required by the Building Division and should only include sheets relevant to public improvements. Public Facility Improvement (PFI) permit plans shall conform to City of Tigard Public Improvement Design Standards, which are available at City Hall and the City's web page ([www.ci.tigard.or.us](http://www.ci.tigard.or.us)).
9. The PFI permit plan submittal shall include the exact legal name, address and telephone number of the individual or corporate entity who will be designated as the "Permittee", and who will provide the financial assurance for the public improvements. For example, specify if the entity is incorporated and provide the name of the corporate contact person. Failure to provide accurate information to the Engineering Department will delay processing of project documents.
10. The applicant shall provide a construction vehicle access and parking plan for approval by the City Engineer. The purpose of this plan is for parking and traffic control during the public improvement construction phase. All construction vehicle parking shall be provided on-site. No construction vehicles or equipment will be permitted to park on the adjoining residential public streets. Construction vehicles include the vehicles of any contractor or subcontractor involved in the construction of site improvements or buildings proposed by this application, and shall include the vehicles of all suppliers and employees associates with the project.
11. The applicant shall submit construction plans to the Engineering Department as a part of the Public Facility Improvement permit, which indicate that they will construct a half-street improvement along the frontage of 74<sup>th</sup> Avenue. The improvements adjacent to this site shall

include:

- A. City standard pavement section for a neighborhood route, without bike lanes, from curb to centerline equal to 16 feet, with a minimum pavement width of 24 feet;
  - B. Pavement tapers needed to tie the new improvement back into the existing edge of pavement shall be built beyond the site frontage;
  - C. Concrete curb, or curb and gutter as needed;
  - D. Storm drainage, including any off-site storm drainage necessary to convey surface and/or subsurface runoff;
  - E. 5-foot concrete sidewalk with a planter strip (unless adjusted);
  - F. Street trees in the planter strip spaced per TDC requirements;
  - G. Street striping;
  - H. Streetlight layout by applicant's engineer, to be approved by City Engineer;
  - I. Underground utilities;
  - J. Street signs (if applicable);
  - K. Driveway apron (if applicable);
  - L. Adjustments in vertical and/or horizontal alignment to construct SW 74<sup>th</sup> Avenue in a safe manner, as approved by the Engineering Department, including reductions to the speed limit as necessary; and
  - M. Right-of-way dedication to provide 27 feet from centerline.
12. The applicant's Public Facility Improvement permit construction drawings shall indicate that full width street improvements, including traffic control devices, mailbox clusters, concrete sidewalks, driveway aprons, curbs, asphaltic concrete pavement, sanitary sewers, storm drainage, street trees, streetlights, and underground utilities shall be installed within the interior subdivision streets. Improvements shall be designed and constructed to local street standards.
13. A profile of 74<sup>th</sup> Avenue shall be required, extending 300 feet either side of the subject site showing the existing grade and proposed future grade.
14. The applicant's construction drawings shall show that the pavement and rock section for the proposed private street(s) shall meet the City's public street standard for a local residential street.
15. The applicant shall obtain approval from the Tualatin Valley Water District for the proposed water connection prior to issuance of the City's Public Facility improvement permit.
16. Final design plans and calculations for the proposed public water quality/detention facility shall be submitted to the Engineering Department (Kim McMillan) as a part of the Public Facility Improvement plans. Included with the plans shall be a proposed landscape plan to be approved by the City Engineer. The proposed facility shall be dedicated in a tract to the City of Tigard on the final plat. As a part of the improvement plans submittal, the applicant shall submit an Operations and Maintenance Manual for the proposed facility for approval by the Maintenance Services Director. The facility shall be maintained by the developer for a three-year period from the conditional acceptance of the public improvements. A written evaluation of the operation and maintenance shall be submitted and approved prior to acceptance for maintenance by the City. Once the three-year maintenance period is completed, the City will inspect the facility and make note of any problems that have arisen and require them to be resolved before the City will take over maintenance of the facility. In addition, the City will not take over maintenance of the facility unless 80 percent of the landscaping is established and healthy. If at any time during the

maintenance period, the landscaping falls below the 80 percent level, the developer shall immediately reinstall all deficient planting at the next appropriate planting opportunity.

17. An erosion control plan shall be provided as part of the Public Facility Improvement (PFI) permit drawings. The plan shall conform to the "Erosion Prevention and Sediment Control Design and Planning Manual, December 2000 edition."
18. A final grading plan shall be submitted showing the existing and proposed contours. The plan shall detail the provisions for surface drainage of all lots, and show that they will be graded to ensure the surface drainage is directed to the street or a public storm drainage system approved by the Engineering Department. For situations where the back portions of lots drain away from a street and toward adjacent lots, appropriate private storm drainage lines shall be provided to sufficiently contain and convey runoff from each lot.
19. The applicant shall incorporate the recommendations from the submitted geotechnical report by GeoPacific Engineering, Inc., dated May 9, 2003, into the final grading plan. The applicant shall have the geotechnical engineer ensure that all grading, including cuts and fills, are constructed in accordance with the approved plan and Appendix Chapter 33 of the UBC. A final construction supervision report shall be filed with the Engineering Department prior to issuance of building permits.
20. The design engineer shall indicate, on the grading plan, which lots will have natural slopes between 10% and 20%, as well as lots that will have natural slopes in excess of 20%. This information will be necessary in determining if special grading inspections and/of permits will be necessary when the lots develop.
21. The final construction plans shall be signed by the geotechnical engineer to ensure that they have reviewed and approved the plans. The geotechnical engineer shall also sign the as-built grading plan at the end of the project.
22. The applicant shall obtain a 1200-C General Permit issued by the City of Tigard pursuant to ORS 468.740 and the Federal Clean Water Act.

**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO APPROVAL OF THE FINAL PLAT:**

**Submit to the Planning Department (Morgan Tracy, 639-4171, ext 2428) for review and approval:**

23. Prior to approval of the final plat, the applicant shall revise the plat to accommodate a minimum of 25 feet of frontage for all lots within the development.
24. Submit a revised street tree/landscape plan that shows an alternative tree species used for the public street to vary the streetscape.
25. The applicant shall provide joint access within an easement or tract to Lots 28 and 29 and cause a statement to be placed on the plat limiting additional direct vehicular access to SW 74<sup>th</sup> Avenue.
26. Provide a plat name reservation approval from Washington County.

27. Prior to final subdivision plat approval, the applicant shall convey title for the proposed open space to a homeowner's association in accordance with the requirements of Section 18.350.110.A.2.b of the Tigard Development Code.

**Submit to the Engineering Department (Kim McMillan), 639-4171, ext. 2642) for review and approval:**

28. Prior to approval of the final plat the applicant shall obtain a plumbing permit for the construction of the private storm line in the private street.
29. Prior to approval of the final plat, the applicant shall pay an addressing fee in the amount of \$900.00 (Staff Contact: Shirley Treat, Engineering).
30. Prior to approval of the final plat, the applicant shall cause a statement to be placed on the final plat to indicate that the proposed private street(s) will be jointly owned and maintained by the private property owners who abut and take access from it (them).
31. Prior to approval of the final plat, the applicant shall prepare Conditions, Covenants and Restrictions (CC&R's) for this project, to be recorded with the final plat, that clearly lays out a maintenance plan and agreement for the proposed private street(s). The CC&R's shall obligate the private property owners within the subdivision to create a homeowner's association to ensure regulation of maintenance for the street(s). The CC&R's shall additionally establish restrictions regarding the removal of trees greater than 12 inches in diameter from any of the lots or tracts following completion of the subdivision improvements. Trees may only be allowed to be removed subject to a certified arborist's finding that the trees are dead, or in severe decline. The applicant shall submit a copy of the CC&R's to the Engineering Department (Kim McMillan) and the Planning Department (Morgan Tracy) prior to approval of the final plat.
32. Prior to approval of the final plat, the applicant shall demonstrate that they have formed and incorporated a homeowner's association.
33. Prior to approval of the final plat, the applicant shall either place the existing overhead utility lines along SW 74<sup>th</sup> Avenue underground as a part of this project, or they shall pay the fee in-lieu of under grounding. The fee shall be calculated by the frontage of the site that is parallel to the utility lines and will be \$27.50 per lineal foot. If the fee option is chosen, the amount will be \$11,578.00 and it shall be paid prior to final plat approval.
34. Prior to approval of the final plat, the applicant shall provide a maintenance access road to the facility and any drainage structures within the facility to accommodate City maintenance vehicles. The access road shall be paved and have a structural section capable of accommodating a 50,000-pound vehicle. The paved width shall be a minimum of 10 feet wide, and there shall be two-foot rock shoulders provided on each side. If the maintenance roadway is over 150 feet in length, a turnaround shall be provided.
35. The applicant's final plat shall contain State Plane Coordinates on two monuments with a tie to the City's global positioning system (GPS) geodetic control network (GC 22). These monuments shall be on the same line and shall be of the same precision as required for the subdivision plat boundary. Along with the coordinates, the plat shall contain the scale factor to convert ground measurements to grid measurements and the angle from north to grid north. These coordinates

can be established by:

- GPS tie networked to the City's GPS survey.
- By random traverse using conventional surveying methods.

36. Final Plat Application Submission Requirements:

- A. Submit for City review four (4) paper copies of the final plat prepared by a land surveyor licensed to practice in Oregon, and necessary date or narrative.
- B. Attach a check in the amount of the current final plat review fee (Contact Planning/Engineering Permit Technicians, at (503) 639-4171, ext. 426).
- C. The final plat and date or narrative shall be drawn to the minimum standards set forth by the Oregon Revised Statutes (ORS 92.05), Washington County, and by the City of Tigard.
- D. The right-of-way dedication for 74<sup>th</sup> Avenue shall be made on the final plat.
- E. Note: Washington County will not begin their review of the final plat until they receive notice from the Engineering Department indicating that the City has reviewed the final plat and submitted comments to the applicant's surveyor.
- F. After the City and County have reviewed the final plat, submit two mylar copies of the final plat for City Engineer signature (for partitions), or City Engineer and Community Development Director signatures (for subdivisions).

**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO ISSUANCE OF BUILDING PERMITS:**

**Submit to the Planning Department (Morgan Tracy, 639-4171, ext. 2428) for review and approval:**

37. Prior to issuance of any building permits, re-plant any area where vegetation has been removed as a result of grading in conformance with the Clean Water Services Standards as set forth in the site assessment file #2819, prior to obtaining building permits.
38. Prior to issuance of any building permits, the applicant shall submit plans that show one (1) off-street parking space, which meets minimum dimensional requirements and setback requirements as specified in Title 18, provided on-site for each new home.
39. At the time of application for building permits for individual homes, the applicant shall demonstrate that each site will be accessed by a minimum 10-foot-wide paved access.
40. Prior to the issuance of building permits, the developer shall sign a copy of the City's sign compliance agreement.
41. Prior to the issuance of building permits the applicant shall submit a revised plan that indicates the modified setbacks as set forth in this decision and record a copy of the approved setback plan with the deeds for each lot.
42. Prior to issuance of building permits for structures on the individual lots within this development, the applicant shall demonstrate compliance with the height requirement of the underlying zone. The requirement calls for 30-foot maximum height for primary units and 15 feet maximum for all accessory structures.



43. Prior to the issuance of building permits on any lot, the applicant must provide city staff with a letter from Clean Water Services that indicates compliance with the approved service provider letter (#2819).

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

44. Prior to issuance of building permits the applicant's engineer shall provide a post-construction sight distance certification for the new intersection at 74<sup>th</sup> Avenue.
45. The City Engineer may determine the necessity for, and require submittal and approval of, a construction access and parking plan for the home building phase. If the City Engineer deems such a plan necessary, the applicant shall provide the plan prior to issuance of building permits.
46. Prior to issuance of building permits, the City Engineer shall deem the public improvements substantially complete. Substantial completion shall be when: 1) all utilities are installed and inspected for compliance, including franchise utilities, 2) all local residential street have at least one lift of asphalt, 3) any off-street and/or utility improvements are substantially completed, and 4) all street lights are installed and ready to be energized. Note: The City apart from this condition, and in accordance with the City's model home policy may issue model home permits).
47. Prior to issuance of building permits, the applicant shall provide the City with as-built drawings of the public improvements as follows: 1) 3 mil mylar, 2) a diskette of the as-builts in "DWG" format, if available; otherwise "DXF" will be acceptable, and 3) the as-built drawings shall be tied to the City's GPS network. The applicant's engineer shall provide the City with an electronic file with points for each structure (manholes, catch basins, water valves, hydrants and other water system features) in the development, and their respective X and Y State Plane Coordinates, referenced to NAD 83 (91).
48. Prior to issuance of building permits, the applicant shall provide the Engineering Department with a "photo mylar" copy of the recorded final plat.
49. The applicant shall provide signage at the entrance of each shared flag lot driveway or private street that lists the addresses that are served by the given driveway or street.

**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO ISSUANCE OF FINAL BUILDING INSPECTION:**

50. The applicant shall install street trees and an evergreen hedge of Leyland Cypress spaced no greater than three feet on center along the northern property line of Lots 1-10 and the eastern property line of Lots 10-12.

**ADDITIONAL CONDITIONS OF APPROVAL  
FOR ASH CREEK ESTATES:**

51. The applicant and future owners of lots within the development shall ensure that the requirements of CDC 18.725 (Environmental Performance Standards) are complied with at all times.

We hope the findings provided above can be included in the Final Order of the City Council regarding the

approval of Ash Creek Estates Subdivision. Feel free to contact us if there is any additional information required for your report.

Sincerely,

Steve Kay  
Kurahashi and Associates

cc. Morgan Tracy  
Associate Planner  
City of Tigard

**STAFF REPORT TO THE  
PLANNING COMMISSION  
FOR THE CITY OF TIGARD, OREGON**



**120 DAYS = 10/2/2003**

## **SECTION I. APPLICATION SUMMARY**

<b>FILE NAME:</b>	<b>ASH CREEK ESTATES SUBDIVISION</b>	
<b>CASE NOS.:</b>	<b>Subdivision (SUB)</b> Zone Change (ZON) Planned Development Review (PDR) Sensitive Lands Review (SLR) Adjustment (VAR) Adjustment (VAR)	<b>SUB2003-00010</b> <b>ZON2003-00003</b> <b>PDR2003-00004</b> <b>SLR2003-00005</b> <b>VAR2003-00036</b> <b>VAR2003-00037</b>

**APPLICANT:** Dale Richards  
Winwood Construction  
12655 SW North Dakota Street  
Tigard, OR 97223

**OWNER:** Ernest E. and Elda H. Senn  
9750 SW 74<sup>th</sup> Avenue  
Tigard, OR 97223

**PROJECT CONTACT:** Kurahashi and Associates  
Attn: Greg Kurahashi  
15580 SW Jay, Suite 200  
Beaverton, OR 97006

**REQUEST:** Approval of a 29-lot Subdivision and Planned Development on 9.3 acres. The lots are proposed to be developed with detached single-family homes. Lot sizes within the development are proposed to be between 4,702 and 11,616 square feet. Sensitive Lands Review is required as the project includes areas of steep (>25%) slopes, a drainageway and wetlands. The applicant is also seeking an Adjustment to the cul-de-sac length standard, maximum number of units permitted on a cul-de-sac, as well as an Adjustment to the street grade on SW 74<sup>th</sup> Avenue.

**ZONING DESIGNATION:** R-4.5: Low-Density Residential District. The R-4.5 zoning district is designed to accommodate detached single-family homes with or without accessory residential units at a minimum lot size of 7,500 square feet. Duplexes and attached single-family units are permitted conditionally. Some civic and institutional uses are also permitted conditionally.

**LOCATION:** 9750 SW 74<sup>th</sup> Avenue; WCTM 1S125DC, Tax Lots 300 and 400.

**APPLICABLE REVIEW CRITERIA:** Community Development Code Chapters 18.350, 18.370, 18.380, 18.390, 18.430, 18.510, 18.705, 18.715, 18.725, 18.745, 18.755, 18.765, 18.790, 18.795 and 18.810.

## **SECTION II. STAFF RECOMMENDATION**

Staff recommends that the Planning Commission find that the proposed Planned Development and street adjustments will not adversely affect the health, safety and welfare of the City and meets the Approval Standards as outlined in this report. Therefore, Staff recommends **APPROVAL**, subject to the following recommended Conditions of Approval and Findings within the staff report:

## CONDITIONS OF APPROVAL

### THE FOLLOWING CONDITIONS SHALL BE SATISFIED PRIOR TO COMMENCING ANY ONSITE IMPROVEMENTS, INCLUDING GRADING, EXCAVATION AND/OR FILL ACTIVITIES:

**Submit to the Planning Department (Morgan Tracy, 639-4171, ext. 2428) for review and approval:**

1. Prior to site work, the applicant shall submit an arborist report with tree protection recommendations, and shall provide the City Arborist with a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving.
2. Prior to site work, the applicant shall submit a complete set of construction documents with the tree locations for the City Arborists review.
3. Prior to site work, the applicant shall notify the City Arborist at least 48 hours prior to commencing construction when the tree protection measures are in place so that he may verify that the measures will function properly.
4. Prior to site work, the applicant shall provide evidence of all necessary approvals for work within the wetlands from US Army Corps of Engineers and the Division of State Lands.
5. Prior to site work, the drainage tract must be clearly identified in the field with permanent (preferably with minimum 4-foot-tall black chainlink) fencing so as to insure no grading or material is placed in this area. Any fencing that is damaged during construction must be replaced prior to final building inspection. If the damage is such that it will no longer effectively identify the tract, it shall be replaced/reinstalled immediately.
6. Prior to site work, a signed approval shall be included with the City's construction drawing packet.

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

7. Prior to approval of construction plans, the applicant shall pothole the City of Tualatin's main water transmission line to determine the exact location and condition of the pipe. The applicant shall notify the City of Tigard and the City of Tualatin 48 hours prior to the pothole inspections and when any construction activity will impact the pipe (such as placement of fill and excavation in the immediate vicinity) so that a representative from the City can be present.
8. Prior to commencing onsite improvements, a Public Facility Improvement (PFI) permit is required for this project to cover all infrastructure and any other work in the public right-of-way. Eight (8) sets of detailed public improvement plans shall be submitted for review to the Engineering Department. NOTE: these plans are in addition to any drawings required by the Building Division and should only include sheets relevant to public improvements. Public Facility Improvement (PFI) permit plans shall conform to City of Tigard Public Improvement Design Standards, which are available at City Hall and the City's web page ([www.ci.tigard.or.us](http://www.ci.tigard.or.us)).
9. The PFI permit plan submittal shall include the exact legal name, address and telephone number of the individual or corporate entity who will be designated as the "Permittee", and who will provide the financial assurance for the public improvements. For example, specify if the entity is a corporation, limited partnership, LLC, etc. Also specify the state within which the entity is incorporated and provide the name of the corporate contact person. Failure to provide accurate information to the Engineering Department will delay processing of project documents.
10. The applicant shall provide a construction vehicle access and parking plan for approval by the City Engineer. The purpose of this plan is for parking and traffic control during the public improvement construction phase. All construction vehicle parking shall be provided on-site. No construction vehicles or equipment will be permitted to park on the adjoining residential public streets. Construction vehicles include the vehicles of any contractor or subcontractor involved in the construction of site improvements or buildings proposed by this application, and shall include the vehicles of all suppliers and employees associated with the project.

11. The applicant shall submit construction plans to the Engineering Department as a part of the Public Facility Improvement permit, which indicate that they will construct a half-street improvement along the frontage of 74<sup>th</sup> Avenue. The improvements adjacent to this site shall include:
  - A. City standard pavement section for a neighborhood route, without bike lanes, from curb to centerline equal to 16 feet, with a minimum pavement width of 24 feet;
  - B. pavement tapers needed to tie the new improvement back into the existing edge of pavement shall be built beyond the site frontage;
  - C. concrete curb, or curb and gutter as needed;
  - D. storm drainage, including any off-site storm drainage necessary to convey surface and/or subsurface runoff;
  - E. 5-foot concrete sidewalk with a planter strip (unless adjusted);
  - F. street trees in the planter strip spaced per TDC requirements;
  - G. street striping;
  - H. streetlight layout by applicant's engineer, to be approved by City Engineer;
  - I. underground utilities;
  - J. street signs (if applicable);
  - K. driveway apron (if applicable);
  - L. adjustments in vertical and/or horizontal alignment to construct SW 74<sup>th</sup> Avenue in a safe manner, as approved by the Engineering Department; and
  - M. right-of-way dedication to provide 27 feet from centerline.
12. The applicant's Public Facility Improvement permit construction drawings shall indicate that full width street improvements, including traffic control devices, mailbox clusters, concrete sidewalks, driveway aprons, curbs, asphaltic concrete pavement, sanitary sewers, storm drainage, street trees, streetlights, and underground utilities shall be installed within the interior subdivision streets. Improvements shall be designed and constructed to local street standards.
13. A profile of 74<sup>th</sup> Avenue shall be required, extending 300 feet either side of the subject site showing the existing grade and proposed future grade.
14. The applicant's construction drawings shall show that the pavement and rock section for the proposed private street(s) shall meet the City's public street standard for a local residential street.
15. The applicant shall obtain approval from the Tualatin Valley Water District for the proposed water connection prior to issuance of the City's Public Facility Improvement permit.
16. Final design plans and calculations for the proposed public water quality/detention facility shall be submitted to the Engineering Department (Kim McMillan) as a part of the Public Facility Improvement plans. Included with the plans shall be a proposed landscape plan to be approved by the City Engineer. The proposed facility shall be dedicated in a tract to the City of Tigard on the final plat. As a part of the improvement plans submittal, the applicant shall submit an Operations and Maintenance Manual for the proposed facility for approval by the Maintenance Services Director. The facility shall be maintained by the developer for a three-year period from the conditional acceptance of the public improvements. A written evaluation of the operation and maintenance shall be submitted and approved prior to acceptance for maintenance by the City. Once the three-year maintenance period is completed, the City will inspect the facility and make note of any problems that have arisen and require them to be resolved before the City will take over maintenance of the facility. In addition, the City will not take over maintenance of the facility unless 80 percent of the landscaping is established and healthy. If at any time during the maintenance period, the landscaping falls below the 80 percent level, the developer shall immediately reinstall all deficient planting at the next appropriate planting opportunity.
17. An erosion control plan shall be provided as part of the Public Facility Improvement (PFI) permit drawings. The plan shall conform to the "Erosion Prevention and Sediment Control Design and Planning Manual, December 2000 edition."

18. A final grading plan shall be submitted showing the existing and proposed contours. The plan shall detail the provisions for surface drainage of all lots, and show that they will be graded to ensure that surface drainage is directed to the street or a public storm drainage system approved by the Engineering Department. For situations where the back portions of lots drain away from a street and toward adjacent lots, appropriate private storm drainage lines shall be provided to sufficiently contain and convey runoff from each lot.
19. The applicant shall incorporate the recommendations from the submitted geotechnical report by GeoPacific Engineering, Inc., dated May 9, 2003, into the final grading plan. The applicant shall have the geotech engineer review and approve the construction plans for the City's review and approval. The geotechnical engineer shall be employed by the applicant throughout the entire construction period to ensure that all grading, including cuts and fills, are constructed in accordance with the approved plan and Appendix Chapter 33 of the UBC. A final construction supervision report shall be filed with the Engineering Department prior to issuance of building permits.
20. The design engineer shall indicate, on the grading plan, which lots will have natural slopes between 10% and 20%, as well as lots that will have natural slopes in excess of 20%. This information will be necessary in determining if special grading inspections and/or permits will be necessary when the lots develop.
21. The final construction plans shall be signed by the geotechnical engineer to ensure that they have reviewed and approved the plans. The geotechnical engineer shall also sign the as-built grading plan at the end of the project.
22. The applicant shall obtain a 1200-C General Permit issued by the City of Tigard pursuant to ORS 468.740 and the Federal Clean Water Act.

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**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO APPROVAL OF THE FINAL PLAT:**

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**Submit to the Planning Department (Morgan Tracy, 639-4171, ext. 2428) for review and approval:**

23. Prior to approval of the final plat, the applicant shall revise the plat to accommodate a minimum of 25 feet of frontage for all lots within the development.
24. Submit a revised street tree/landscape plan that shows an alternative tree species used for either the public or private street to vary the streetscape.
25. The applicant shall provide joint access within an easement or tract to Lots 28 and 29 and cause a statement to be placed on the plat limiting additional direct vehicular access to SW 74<sup>th</sup> Avenue.
26. Provide a plat name reservation approval from Washington County.
27. Prior to final subdivision plat approval, the applicant shall convey title for the proposed open space to a homeowner's association in accordance with the requirements of Section 18.350.110.A.2.b of the Tigard Development Code.

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

28. Prior to approval of the final plat the applicant shall obtain a plumbing permit for the construction of the private storm line in the private street.
29. Prior to approval of the final plat, the applicant shall pay an addressing fee in the amount of \$900.00. (STAFF CONTACT: Shirley Treat, Engineering).
30. Prior to approval of the final plat, the applicant shall cause a statement to be placed on the final plat to indicate that the proposed private street(s) will be jointly owned and maintained by the private property owners who abut and take access from it (them).

31. Prior to approval of the final plat, the applicant shall prepare Conditions, Covenants and Restrictions (CC&R's) for this project, to be recorded with the final plat, that clearly lays out a maintenance plan and agreement for the proposed private street(s). The CC&R's shall obligate the private property owners within the subdivision to create a homeowner's association to ensure regulation of maintenance for the street(s). The applicant shall submit a copy of the CC&R's to the Engineering Department (Kim McMillan) prior to approval of the final plat.
32. Prior to approval of the final plat, the applicant shall demonstrate that they have formed and incorporated a homeowner's association.
33. Prior to approval of the final plat, the applicant shall either place the existing overhead utility lines along SW 74<sup>th</sup> Avenue underground as a part of this project, or they shall pay the fee in-lieu of undergrounding. The fee shall be calculated by the frontage of the site that is parallel to the utility lines and will be \$27.50 per lineal foot. If the fee option is chosen, the amount will be \$11,578.00 and it shall be paid prior to final plat approval.
34. Prior to approval of the final plat, the applicant shall provide a maintenance access road to the facility and any drainage structures within the facility to accommodate City maintenance vehicles. The access road shall be paved and have a structural section capable of accommodating a 50,000-pound vehicle. The paved width shall be a minimum of 10 feet wide, and there shall be two-foot rock shoulders provided on each side. If the maintenance roadway is over 150 feet in length, a turnaround shall be provided.
35. The applicant's final plat shall contain State Plane Coordinates on two monuments with a tie to the City's global positioning system (GPS) geodetic control network (GC 22). These monuments shall be on the same line and shall be of the same precision as required for the subdivision plat boundary. Along with the coordinates, the plat shall contain the scale factor to convert ground measurements to grid measurements and the angle from north to grid north. These coordinates can be established by:
  - ♦ GPS tie networked to the City's GPS survey.
  - ♦ By random traverse using conventional surveying methods.
36. Final Plat Application Submission Requirements:
  - A. Submit for City review four (4) paper copies of the final plat prepared by a land surveyor licensed to practice in Oregon, and necessary data or narrative.
  - B. Attach a check in the amount of the current final plat review fee (Contact Planning/Engineering Permit Technicians, at (503) 639-4171, ext. 426).
  - C. The final plat and data or narrative shall be drawn to the minimum standards set forth by the Oregon Revised Statutes (ORS 92.05), Washington County, and by the City of Tigard.
  - D. The right-of-way dedication for 74<sup>th</sup> Avenue shall be made on the final plat.
  - E. **NOTE:** Washington County will not begin their review of the final plat until they receive notice from the Engineering Department indicating that the City has reviewed the final plat and submitted comments to the applicant's surveyor.
  - F. After the City and County have reviewed the final plat, submit two mylar copies of the final plat for City Engineer signature (for partitions), or City Engineer and Community Development Director signatures (for subdivisions).

**THE FOLLOWING CONDITIONS SHALL BE SATISFIED  
PRIOR TO ISSUANCE OF BUILDING PERMITS:**

**Submit to the Planning Department (Morgan Tracy, 639-4171, ext. 2428) for review and approval:**

37. Prior to issuance of any building permits, re-plant any area where vegetation has been removed as a result of grading in conformance with the Clean Water Services Standards as set forth in the site assessment file #2819, prior to obtaining building permits.
38. Prior to issuance of any building permits, the applicant shall submit plans that show one (1) off-street parking space, which meets minimum dimensional requirements and setback requirements as specified in Title 18, provided on-site for each new home.

39. At the time of application for building permits for individual homes, the applicant shall demonstrate that each site will be accessed by a minimum 10-foot-wide paved access.
40. Prior to the issuance of building permits, the developer shall sign a copy of the City's sign compliance agreement.
41. Prior to the issuance of building permits the applicant shall submit a revised plan that indicates the modified setbacks as set forth in this decision (page 11) and record a copy of the approved setback plan with the deeds for each lot.
42. Prior to issuance of building permits for structures on the individual lots within this development, the applicant shall demonstrate compliance with the height requirement of the underlying zone. The requirement calls for a 30-foot maximum height for primary units and 15 feet maximum for all accessory structures.
44. Prior to the issuance of building permits on any lot, the applicant must provide city staff with a letter from Clean Water Services that indicates compliance with the approved service provider letter (#2819).

**Submit to the Engineering Department (Kim McMillan, 639-4171, ext. 2642) for review and approval:**

45. Prior to issuance of building permits the applicant's engineer shall provide a post-construction sight distance certification for the new intersection at 74<sup>th</sup> Avenue.
46. The City Engineer may determine the necessity for, and require submittal and approval of, a construction access and parking plan for the home building phase. If the City Engineer deems such a plan necessary, the applicant shall provide the plan prior to issuance of building permits.
47. Prior to issuance of building permits, the City Engineer shall deem the public improvements substantially complete. Substantial completion shall be when: 1) all utilities are installed and inspected for compliance, including franchise utilities, 2) all local residential streets have at least one lift of asphalt, 3) any off-site street and/or utility improvements are substantially completed, and 4) all street lights are installed and ready to be energized. (NOTE: the City apart from this condition, and in accordance with the City's model home policy may issue model home permits).
48. Prior to issuance of building permits, the applicant shall provide the City with as-built drawings of the public improvements as follows: 1) 3 mil mylar, 2) a diskette of the as-builts in "DWG" format, if available; otherwise "DXF" will be acceptable, and 3) the as-built drawings shall be tied to the City's GPS network. The applicant's engineer shall provide the City with an electronic file with points for each structure (manholes, catch basins, water valves, hydrants and other water system features) in the development, and their respective X and Y State Plane Coordinates, referenced to NAD 83 (91).
49. Prior to issuance of building permits, the applicant shall provide the Engineering Department with a "photomylar" copy of the recorded final plat.
50. The applicant shall provide signage at the entrance of each shared flag lot driveway or private street that lists the addresses that are served by the given driveway or street.

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**IN ADDITION, THE APPLICANT SHOULD BE AWARE OF THE FOLLOWING SECTIONS OF THE COMMUNITY DEVELOPMENT CODE; THIS IS NOT AN EXCLUSIVE LIST:**

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**18.430.080 Improvement Agreement:**

Before City approval is certified on the final plat, and before approved construction plans are issued by the City, the Subdivider shall:

1. Execute and file an agreement with the City Engineer specifying the period within which all required improvements and repairs shall be completed; and



2. Include in the agreement provisions that if such work is not completed within the period specified, the City may complete the work and recover the full cost and expenses from the subdivider.

The agreement shall stipulate improvement fees and deposits as may be required to be paid and may also provide for the construction of the improvements in stages and for the extension of time under specific conditions therein stated in the contract.

**18.430.090 Bond:**

As required by Section 18.430.080, the subdivider shall file with the agreement an assurance of performance supported by one of the following:

1. An irrevocable letter of credit executed by a financial institution authorized to transact business in the State of Oregon;
2. A surety bond executed by a surety company authorized to transact business in the State of Oregon which remains in force until the surety company is notified by the City in writing that it may be terminated; or
3. Cash.

The subdivider shall furnish to the City Engineer an itemized improvement estimate, certified by a registered civil engineer, to assist the City Engineer in calculating the amount of the performance assurance.

The subdivider shall not cause termination of nor allow expiration of said guarantee without having first secured written authorization from the City.

**18.430.100 Filing and Recording:**

Within 60 days of the City review and approval, the applicant shall submit the final plat to the County for signatures of County officials as required by ORS Chapter 92.

Upon final recording with the County, the applicant shall submit to the City a mylar copy of the recorded final plat.

**18.430.070 Final Plat Application Submission Requirements:**

Three copies of the subdivision plat prepared by a land surveyor licensed to practice in Oregon, and necessary data or narrative.

The subdivision plat and data or narrative shall be drawn to the minimum standards set forth by the Oregon Revised Statutes (ORS 92.05), Washington County, and by the City of Tigard.

**STREET CENTERLINE MONUMENTATION SHALL BE PROVIDED AS FOLLOWS:**

**Centerline Monumentation**

In accordance with Oregon Revised Statutes 92.060, subsection (2), the centerline of all street and roadway rights-of-way shall be monumented before the City accepts a street improvement.

The following centerline monuments shall be set:

1. All centerline-centerline intersection points;
2. All cul-de-sac center points; and
3. Curve points, beginning and ending points (PC's and PT's).

All centerline monuments shall be set during the first lift of pavement.

**Monument Boxes Required**

Monument boxes conforming to City standards will be required around all centerline intersection points, cul-de-sac center points, and curve points.

The tops of all monument boxes shall be set to finished pavement grade.

## **18.810 Street & Utility Improvement Standards:**

### **18.810.120 Utilities**

All utility lines including, but not limited to those required for electric, communication, lighting and cable television services and related facilities shall be placed underground, except for surface-mounted transformers, surface-mounted connection boxes, and meter cabinets which may be placed above ground, temporary utility service facilities during construction, high capacity electric lines operating at 50,000 volts or above.

### **18.810.130 Cash or Bond Required**

All improvements installed by the subdivider shall be guaranteed as to workmanship and material for a period of one year following acceptance by the City.

Such guarantee shall be secured by cash deposit or bond in the amount of the value of the improvements as set by the City Engineer.

The cash or bond shall comply with the terms and conditions of Section 18.810.180.

### **18.810.150 Installation Prerequisite**

No land division improvements, including sanitary sewers, storm sewers, streets, sidewalks, curbs, lighting or other requirements shall be undertaken except after the plans, therefore, have been approved by the City, permit fee paid and permit issued.

### **18.810.180 Notice to City Required**

Work shall not begin until the City has been notified in advance.

If work is discontinued for any reason, it shall not be resumed until the City is notified.

### **18.810.200 Engineer's Certification**

The land divider's engineer shall provide written certification of a form provided by the City that all improvements, workmanship and materials are in accord with current and standard engineering and construction practices, and are of high grade, prior to the City acceptance of the subdivision's improvements or any portion thereof for operation and maintenance.

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**THIS APPROVAL SHALL BE VALID FOR 18 MONTHS FROM THE EFFECTIVE DATE OF THE PLANNING COMMISSION'S DECISION.**

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## **SECTION III. BACKGROUND INFORMATION**

### **Site History**

The property is currently developed with one single-family residence and a couple of small outbuildings. An effort by surrounding neighbors to acquire this property for open space purposes was unsuccessful. A search of city records found no previous land use cases associated with this parcel.

### **Vicinity Information:**

The site is located in the northwest corner of the City limits, south of SW Taylor's Ferry Road, on the east side of SW 74<sup>th</sup> Avenue. The property is surrounded on all sides by single-family residences on lots that vary in size. There is a stream (Ash Creek) on the property that runs in an east west direction along the southern property boundary. This drainageway contains wetlands and areas of steep slopes.

### **Proposal Information:**

The applicant is proposing to subdivide the parcel into 29 lots for single-family residences. Because of the trees, wetlands, and slopes on the site, the applicant has requested a planned development to allow them to vary the underlying zoning standards to develop around these features. The applicant is also requesting an adjustment to allow a curb tight sidewalk as opposed to a sidewalk separated from the travel surface by a planter strip, and an adjustment to the cul-de-sac standards limiting the number of units on a cul-de-sac and the 200-foot maximum length permitted for a cul-de-sac.

## **SECTION IV. DECISION MAKING PROCEDURES, PERMITS AND USE**

### **USE CLASSIFICATION: SECTION 18.130.020**

**Lists the Use Categories.**

The applicant is seeking approval of a 29-lot subdivision on 9.3 acres. The lots are to be developed with detached single-family homes. The existing single-family home is to be demolished. Lot sizes within the development are between 4,702 and 11,616 square feet. The applicant is also proposing to set aside an approximate 4.15 acre open space tract for the drainageway and wetland area. A private street cul-de-sac is also proposed to extend from the public street stub into the property. The site is located within the R-4.5, Low Density Residential District. Planned Developments are permitted in all districts. The applicant has applied for conceptual and detailed planned development approval in conjunction with the subdivision.

### **SUMMARY LAND USE PERMITS: CHAPTER 18.310**

**Defines the decision-making type to which the land-use application is assigned.**

This is a Planned Development/Subdivision, which is defined as a Type III-PC Application. Adjustments are typically Type II Administrative decisions and Type III sensitive lands decisions are heard by the Tigard Hearings Officer; however, when applications are heard concurrently, the highest decision making body will make the decision on all matters, as described below.

### **DECISION MAKING PROCEDURES: CHAPTER 18.390**

**Describes the decision-making procedures.**

Type III procedures apply to quasi-judicial permits and actions that contain predominantly discretionary approval criteria. Type III-PC actions are decided by the Planning Commission with appeals to the City Council. Type III-HO actions are decided by the Hearings Officer with appeals to City Council. In cases where both the Hearings Officer and Planning Commission are involved, the Planning Commission has preferential jurisdiction, per Tigard Development Code (TDC) Section 18.390.080(D)(2)(a).

## **SECTION V. NEIGHBORHOOD COMMENTS**

The Tigard Community Development Code requires that property owners within 500 feet of the subject site be notified of the proposal, and be given an opportunity for written comments and/or oral testimony prior to a decision being made. In addition, the applicant is required to post the site with notice of the public hearing. Staff has verified that the site is posted. Staff has not received any written comments from any neighbors about this application. A number of nearby neighbors have expressed interest and concern about the subject proposal; however, no comments have been received since the application was received.

## **SECTION VI. APPLICABLE REVIEW CRITERIA AND FINDINGS**

### **GENERAL PLANNED DEVELOPMENT STANDARDS: CHAPTER 18.350**

The applicant has requested a Planned Development (PD) overlay zone change for the subject property. The PD overlay requires developers to follow the Planned Development process for any proposal on affected sites. The Planned Development chapter provides for flexibility in development design and allows deviation from certain standards of the base zone. The following addresses compliance with the process and applicable base zone standards.

#### **The Planned Development Process:**

**Section 18.350.030 states that there are three elements to the planned development approval process, as follows:**

- ♦ **The approval of the planned development overlay zone;**
- ♦ **The approval of the planned development concept plan; and**
- ♦ **The approval of the detailed development plan.**

This application is for all three elements of the planned development process, overlay zone, concept plan, and detailed plan.

**Applicability Of The Base Zone Development Standards:**

**Section 18.350.070 requires compliance to specific development standards: The provisions of the base zone are applicable as follows:**

**Lot dimensional standards:**

**The minimum lot size, lot depth and lot width standards shall not apply except as related to the density computation under Chapter 18.715;**

The lot sizes range between 4,702 and 11,616 square feet, and there are two tracts proposed to accommodate the private street and the proposed open space. The required lot size for the R-4.5 zoning district is 7,500 square feet unless an applicant specifically requests different lot sizes through the Planned Development (PD) process, as is the case for this proposal. The proposed lot widths have been varied, but all are 50 feet or wider on the building portion of the lots. Average lot depths range from approximately 68-153 feet deep. One of the lots (#29) does not have adequate frontage, and will be conditioned to be modified as described later in this report. The applicant has identified and detailed the requested lot dimensional standards for this development, and the minimum and maximum density requirements have been satisfied as discussed later in this report.

**Site coverage:**

**The site coverage provisions of the base zone shall apply;**

There is no site coverage requirement in the R-4.5 zone; therefore, this criterion is not applicable.

**Building height:**

**The building height provisions shall not apply; and**

The height restriction does not apply within a Planned Development as long as the developer proposes an alternative that is approved. In this case, the developer has not requested an alternative height requirement, but has indicated that the lots will be developed with single-family residences. Because it is not proposed to the contrary, development within this development will be subject to the height requirements of the underlying zone.

**Structure setback provisions:**

**Front yard and rear yard setbacks for structures on the perimeter of the project shall be the same as that required by the base zone unless otherwise provided by Chapter 18.360;**

The applicant has provided a site plan that illustrates building envelopes within the development. The applicant has proposed to maintain a 15-foot rear yard for all structures on lots 1-13, on the perimeter of the project. Lots 24-27 will require a 20-foot front yard, and proposed lot 29 will require a 10-foot south side yard, as it is considered a flag lot. The applicant has proposed specific reduced front yards on the interior of the project to reduce the need for deeper lots and to reduce the grading necessary to accommodate the homes. The applicant has requested that the required front yards within the development be adjusted to 8 feet for primary structures and porches. They have indicated that the setback to the face of garage is proposed to remain at 20 and 22.5 feet. This criterion is satisfied.

**The side yard setback provisions shall not apply except that all detached structures shall meet the Uniform Building Code (UBC) requirements for fire walls;**

The applicant has proposed reducing the side yard setbacks from 5 to 3 feet. Three feet is the minimum separation required for UBC compliance. It should be noted that no projections, such as chimneys or bay windows, shall be permitted to encroach into this side yard area. This criterion has been met.

**Front yard and rear yard setback requirements in the base zone setback shall not apply to structures on the interior of the project except that: (1) A minimum front yard setback of 20 feet is required for any garage structure which opens facing a street; (2) A minimum front yard setback of eight feet is required for any garage opening for an attached single-family dwelling facing a private street as long as the required off-street parking spaces are provided**

As described above, the lots provide a minimum 20-foot setback to the garage. The front and rear yards have been modified as shown in the applicant's plans, however, there are several setbacks that require modification to comply with the code standards as they are perimeter setbacks. Lot 27 is shown with a storm drainage easement. This will need to be set aside in a separate tract, and as such, Lot 27 will no longer front on SW 74<sup>th</sup>, making the front yard on the new public street. A 20-foot front yard setback will be required on this side, as it is a perimeter setback. Lot 29 is a flag lot and is subject to 10-foot side yard setbacks on the perimeter of the project. Additionally, staff recommends that standard rear yard setbacks be applied to the lots that have depths of 100 feet or more (#13-19) as a suitable building envelope has been provided through reduced front yard setbacks, and to further protect the sensitive land resource. A summary of these changes is shown in the following table:

Table 1. Modified Setbacks for Ash Creek PD

Lot #	Garage	Front	Rear	Side	Lot #	Garage	Front	Rear	Side
1	22.5'	8'	15'	15' 3/3'	16	20'	8'	3' 15'	3' 3/3'
2	22.5'	8'	15'	3' 3/3'	17	20'	8'	3' 15'	3' 3/3'
3	22.5'	8'	15'	3' 3/3'	18	20'	8'	3' 15'	3' 3/3'
4	22.5'	8'	15'	3' 3/3'	19	20'	8'	3' 15'	3' 3/3'
5	22.5'	8'	15'	3' 3/3'	20	20'	8'	3'	3' 3/3'
6	22.5'	8'	15'	3' 3/3'	21	20'	8'	3'	3' 3/3'
7	22.5'	8'	15'	3' 3/3'	22	20'	8'	3'	3' 3/3'
8	22.5'	8'	15'	3' 3/3'	23	20'	8'	3' 15'	3' 3/3'
9	22.5'	8'	15'	3' 3/3'	24	20'	20'	3'	3' 3/3'
10	22.5'	8'	15'	3' 3/3'	25	20'	20'	3'	3' 3/3'
11	22.5'	8'	15'	3' 3/3'	26	20'	20'	3'	3' 3/3'
12	20'	8'	15'	3' 3/3'	27	15' 20'	15' 20'	3'	3' 3/3'
13	20'	8'	3' 15'	3' 3/3'	28	15' 20'	15' 20'	3'	3' 3/3'
14	20'	8'	3' 15'	3' 3/3'	29	20'	20'	3'	3' 5' 10'
15	20'	8'	3' 15'	3' 3/3'					

With the changes outlined in the above table, this criterion has been met.

**FINDING:** Several perimeter setbacks do not meet standard code criteria. Staff recommends against the proposed reduced rear yard setbacks on several lots where lot depths exceed 100 feet.

**CONDITIONS:**

- ♦ Prior to the issuance of building permits on the individual structures within this development, the applicant shall demonstrate compliance with the setbacks outlined in the above table. Moreover, the applicant shall submit a revised plan that indicates the modified setbacks and record a copy of the setback plan with the deeds for each lot.
- ♦ Prior to issuance of building permits for structures on the individual lots within this development, the applicant shall demonstrate compliance with the height requirement of the underlying zone. The requirement calls for a 30-foot maximum height for primary units and 15 feet maximum for all accessory structures.

**Other provisions of the base zone:**

**All other provisions of the base zone shall apply except as modified by this chapter.**

Any additional provisions of the base zone are discussed within the body of this report or will be reviewed during the building permit phase.

**FINDING:** The base zone standards that are related to the previously discussed criteria have been satisfied.

## **PD Approval Criteria: 18.350.100**

**Specific planned development approval criteria.** The Commission shall make findings that the following criteria are satisfied when approving or approving with conditions, the concept plan. The Commission shall make findings that the criteria are not satisfied when denying an application.

**All the provisions of the land division provisions, Chapters 18.410, 18.420 and 18.430, shall be met;**

The applicant has applied to subdivide the property concurrently with the planned development approval; therefore, all subdivision criteria must be satisfied. Compliance with the subdivision approval criteria is discussed in greater detail in Chapter 18.430. The application has met or can be conditioned such that the subdivision provisions are satisfied. This criterion is satisfied.

**Except as noted, the provisions of the following chapters shall be utilized as guidelines. A planned development need not meet these requirements where a development plan provides alternative designs and methods, if acceptable to the Commission, that promote the purpose of this section. In each case, the applicant must provide findings to justify the modification of the standards in the chapters listed in Subsection 3 below. The developer may choose to provide or the commission may require additional open space dedication and/or provision of additional amenities, landscaping or tree planting.**

**Chapter 18.715, Density Computation and Limitations.** Unless authorized below, density shall be governed by the density established in the underlying zoning district. The Commission may further authorize a density bonus not to exceed 10% as an incentive to increase or enhance open space, architectural character and/or site variation incorporated into the development. These factors must make a substantial contribution to objectives of the planned development. The degree of distinctiveness and the desirability of variation achieved shall govern the amount of density increase which the Commission may approve according to the following:

- ♦ A maximum of 3% is allowed for the provision of undeveloped common space;
- ♦ A maximum of 3% is allowed for landscaping; streetscape development; developed open spaces, plazas and pedestrian pathways and related amenities; recreation area development; and/or retention of existing vegetation;
- ♦ A maximum of 3% is allowed for creation of visual focal points; use of existing physical amenities such as topography, view, and sun/wind orientation;
- ♦ A maximum of 3% quality of architectural quality and style; harmonious use of materials; innovative building orientation or building grouping; and/or varied use of housing types.

The applicant has not requested any density bonuses. Density will be discussed later in this report under Chapter 18.715.

### **Chapter 18.730, Exceptions to Development Standards;**

None apply. This criterion is not applicable.

### **Chapter 18.795, Visual Clearance Areas;**

The applicants plans show the areas for visual clearance at street intersections. These areas, as well as the areas at the intersection of the driveways and the street will need to be maintained free from obstructions taller than three feet in height. Any violations of this chapter will be remedied through code enforcement.

### **Chapter 18.745, Landscaping and Screening;**

This is a detached single-family proposal adjacent to detached single-family homes. As such, there are no requirements for screening or buffering from neighboring properties. However, as discussed later in this report, the applicant is required to landscape at least 20% of the site within a Planned Development. The applicant has provided a street tree plan for SW 74<sup>th</sup> Avenue and proposes to leave the open space tract in its natural state.

### **Chapter 18.765, Off-street Parking and Loading Requirements;**

The applicant has proposed that all homes will be provided with 2-car garages and at least 20 feet in front of the garages, which should provide more than enough parking for the development. The applicant has also designed the street with adequate width to allow parking on one side of the street. The minimum requirement for household living is one space for every unit. This criterion is satisfied.

### **Chapter 18.705, Access, Egress and Circulation; and**

The applicant has indicated in the narrative that each lot will be served by a driveway to a public or private street. The minimum required width for a driveway is 10-feet, which will be assured at time of building permit review. The proposed private street improvements are evaluated under discussion of compliance with street and utility standards in Chapter 18.810 later in this report.

### **Chapter 18.780, Signs.**

No signs are proposed in conjunction with this development. Any future signage will be subject to the sign permit requirements in Chapter 18.780. There has been a proliferation of sign violations from new subdivisions. In accordance with a new policy adopted by the Director's Designee, all new subdivisions must enter into a sign compliance agreement to facilitate a more expeditious court process for citations.

**FINDING:** Staff finds that the proposed development is consistent with the guidelines listed in the Planned Development Section 18.350.100.B.2. To expedite enforcement of sign violations, a sign compliance agreement will be required.

**CONDITION:** Prior to the issuance of building permits, the developer shall sign a copy of the City's sign compliance agreement.

**In addition, the following criteria shall be met:**

#### **Relationship to the natural and physical environment:**

**The streets, buildings and other site elements shall be designed and located to preserve the existing trees, topography and natural drainage to the greatest degree possible;**

The site is constrained naturally by steep slopes, wetlands, and the drainageway that bisects the property along the southern property boundary. The property is in forest timber deferral through Washington County and is, therefore, not subject to the tree removal ordinance with the exception of the trees in the sensitive lands areas.

The applicant has proposed to remove all the trees within the developable area, and retain the vast majority of trees in the open space tract, except where public facility improvements necessitate tree removal. While this is permissible under existing rules and no mitigation is required by the code, it is unclear to staff how the above standard is being met when opportunities exist to preserve several trees outside the building envelopes and grading areas. The Planning Commission will need to determine whether the preservation of the trees within the open space tract satisfies this standard.

With regard to preservation of topography and natural drainage, it's clear that effort was taken to preserve as much as possible of these features in their natural state. The road width has been reduced in conjunction with public easements and reduced setbacks to minimize the degree of grading required to accommodate the roadway, for both the private street and the extension of SW 74<sup>th</sup>. The drainageway area will be slightly impacted by the proposed (and City required) crossing of SW 74<sup>th</sup>. This impact will be minimized by utilizing oversized culverts and retaining walls to limit the amount of fill encroachment into the corridor.

### **Structures located on the site shall not be in areas subject to ground slumping and sliding;**

The site is characterized with several areas of slopes greater than 25%, and in limited cases up to 50% slope. From the applicant's geotech report, there is one area where previous land slumping has occurred, southwest of the existing residence in the open space tract. The applicant's geotech report notes the locations of construction limits where no further geotechnical study is required, which generally coincide with the rear lot lines of lots 13-27. There are two notable exceptions, on lots 13, 14, and 15 and between lots 22 and 23 where the slopes are steeper, and groundwater was encountered for one of the test pits. The geotech report contains recommendations to address stability of structures and fill on the project site, and requires further study in those two areas. The recommendations of that report will be required as a recommended condition of approval.



**There shall be adequate distance between on-site buildings and other on-site and off-site buildings on adjoining properties to provide for adequate light and air circulation and for fire protection;**

The current proposal does not call for any reduced setbacks along the rear yards of lots 1-12. The open space tract provides ample separation for air circulation and light penetration. The street and front yard setbacks will establish a 46-foot separation between the fronts of the homes. The side yard setbacks have been proposed to be reduced to 3 feet which complies with the UBC without the need for additional rated firewalls. Due to the reduced side yards, no projections into the amended side yards will be allowed. This criterion is satisfied.

**The structures shall be oriented with consideration for the sun and wind directions, where possible; and**

The proposed structures will be oriented with considerations for sun and wind to the extent practical. The majority of the lots are oriented in a north-south direction providing for opportunities to maximize southern glazing exposure.

**Trees preserved to the extent possible. Replacement of trees is subject to the requirements of Chapter 18.790, Tree Removal.**

Trees are preserved in the open space tract to the maximum extent possible for this proposal. Trees outside the sensitive lands area are exempt from the tree removal standards as the property is subject to a forest deferral.

**Buffering, screening and compatibility between adjoining uses:**

**Buffering shall be provided between different types of land uses, e.g., between single-family and multi-family residential, and residential and commercial uses;**

Because the proposed development is for single-family homes in an area characterized by single-family development, the Tigard Development Code (TDC) does not require any additional buffering. This criterion is inapplicable.

**In addition to the requirements of the buffer matrix (Table 18.745.1), the following factors shall be considered in determining the adequacy and extent of the buffer required under Chapter 18.745:**

- ♦ **The purpose of the buffer, for example to decrease noise levels, absorb air pollution, filter dust, or to provide a visual barrier;**
- ♦ **The size of the buffer needs in terms of width and height to achieve the purpose;**
- ♦ **The direction(s) from which buffering is needed;**
- ♦ **The required density of the buffering; and**
- ♦ **Whether the viewer is stationary or mobile.**

As stated previously, there is no requirement for buffering between existing single-family homes and new single-family homes. This criterion is inapplicable.

**On-site screening from view from adjoining properties of such activities as service areas, storage areas, parking lots and mechanical devices on roof tops shall be provided and the following factors shall be considered in determining the adequacy of the type and extent of the screening: (a) What needs to be screened; (b) The direction from which it is needed; and (c) Whether the screening needs to be year- round.**

There are no specific service areas, storage areas, parking lots or mechanical devices proposed with this development. No additional screening is required. This criterion is satisfied.

**Privacy and noise:**

**Non-residential structures which abut existing residential dwellings shall be located on the site or be designed in a manner, to the maximum degree possible, to protect the private areas on the adjoining properties from view and noise; Private outdoor area -- multi-family use: Shared outdoor recreation areas -- multi-family use:**



These criteria relate to non-residential or multi-family structures and are not applicable to the proposed single-family development.

**Access and circulation:**

**The number of allowed access points for a development shall be provided in Chapter 18.705;**

Each lot will have direct frontage to a public or private street. Staff recommends that to reduce the number of driveways on SW 74<sup>th</sup> a Neighborhood Route, lots 28 and 29 should share access. This will be discussed later in this report.

**All circulation patterns within a development must be designed to accommodate emergency vehicles; and**

Comments from Tualatin Valley Fire and Rescue (TVF & R) indicate that the proposed circulation system for the development is acceptable if their conditions are addressed. See Section VIII of this report for more details.

**Provisions shall be made for pedestrian and bicycle ways if such facilities are shown on an adopted plan.**

The project fronts on SW 74<sup>th</sup> Avenue, which is a neighborhood route but has not been designated for bike lanes. This criterion does not apply.

**Landscaping and open space:**

**Residential Development: In addition to the requirements of subparagraphs (4) and (5) of section a of this subsection, a minimum of 20 percent of the site shall be landscaped;**

The open space and drainage tracts of this proposal constitute approximately 44% of the site area. The applicant has indicated that landscaping on the lots will be accomplished by each homeowner separately. The project will exceed the minimum 20% landscape criteria. There is no landscape plan for the open space tract, however, areas of steep slopes that are disturbed are required to be replanted per the recommendations of the applicant's geotech report. Areas within the drainageway and wetlands will require mitigation replanting per the requirements of Clean Water Services and the Division of State Lands. This criterion has been met.

**Public transit:**

**Provisions for public transit may be required where the site abuts a public transit route. The required facilities shall be based on:**

- ♦ The location of other transit facilities in the area; and
- ♦ The size and type of the proposed development

**The required facilities shall be limited to such facilities as:**

- ♦ A waiting shelter;
- ♦ A turn-out area for loading and unloading; and
- ♦ Hard surface paths connecting the development to the waiting area

This site does not abut a public transit route and, therefore, this criterion is not applicable.

**Signs:**

No signage is proposed with this application. Any future signage will require a permit in compliance with the sign code.

**Parking:**

**All parking and loading areas shall be generally laid out in accordance with the requirements set forth in Chapter Chapter 18.765;**

**Up to 50% of required off-street parking spaces for single-family attached dwellings may be provided on one or more common parking lots within the planned development as long as each single-family lot contains one off-street parking space.**

Parking can comply with all applicable requirements of Chapter 18.765.

**Drainage:**

**All drainage provisions shall be generally laid out in accordance with the requirements set forth in Chapter 18.775, and the criteria in the adopted 1981 master drainage plan;**

Storm drainage complies, or will be conditioned to comply with applicable City of Tigard and Clean Water Services (CWS) requirements. For a more detailed discussion of storm drainage, see the discussion of compliance with the requirement of Chapter 18.810 later in this report.

**Floodplain dedication:**

**Where landfill and/or development is allowed within or adjacent to the 100-year floodplain, the City shall require consideration of the dedication of sufficient open land area for a greenway adjoining and within the floodplain. This area shall include portions of a suitable elevation for the construction of a pedestrian/bicycle pathway with the floodplain in accordance with the adopted pedestrian bicycle pathway plan.**

No areas within the 100-year floodplain exist on the site. The applicant's narrative erroneously refers to areas of "100-year floodplain" but this is in fact areas of 25-year floodplain used to identify the extent of the drainageway. Since there are no 100-year floodplains on the property, this criterion is not applicable.

**FINDING:** The proposed development complies, or can be conditioned to comply with all planned development approval criteria contained in Section 18.350.100 of the Tigard Development Code.

**Shared Open Space:**

**Requirements for shared open space:**

**Where the open space is designated on the plan as common open space the following applies:**

- ♦ The open space area shall be shown on the final plan and recorded with the Director; and
- ♦ The open space shall be conveyed in accordance with one of the following methods:

**By dedication to the City as publicly-owned and maintained as open space. Open space proposed for dedication to the City must be acceptable to it with regard to the size, shape, location, improvement and budgetary and maintenance limitations;**

**By leasing or conveying title (including beneficial ownership) to a corporation, home association or other legal entity, with the City retaining the development rights to the property. The terms of such lease or other instrument of conveyance must include provisions suitable to the City Attorney for guaranteeing the following:**

- ♦ The continued use of such land for the intended purposes;
- ♦ Continuity of property maintenance;
- ♦ When appropriate, the availability of funds required for such maintenance;
- ♦ Adequate insurance protection; and
- ♦ Recovery for loss sustained by casualty and condemnation or otherwise.

**By any method which achieves the objectives set forth in Subsection 2 above of this section.**

The applicant has indicated that the open space areas on the site will be conveyed to the developments' Homeowner's Association. To ensure compliance with City of Tigard standards, the following condition shall apply:

**CONDITION:** Prior to final subdivision plat approval, the applicant shall convey title for the proposed open space to a Homeowner's Association in accordance with the requirements of Section 18.350.110.A.2.b of the Tigard Development Code.

**Special adjustments 18.370:**

**Adjustments to development standards within subdivisions (Chapter 18.430).** The Director shall consider the application for adjustment at the same time he/she considers the preliminary plat. An adjustment may be approved, approved with conditions, or denied provided the Director finds:

The applicant is requesting an adjustment to the street improvement standards on SW 74<sup>th</sup> Avenue, and an adjustment to the cul-de-sac standards. Under the new Transportation System Plan, the development is required to provide a planter strip between the curb and sidewalk. The applicant is requesting an adjustment to the standard to allow the sidewalk to be curb tight in order to reduce the amount of fill required in the drainageway area. Also, the applicant has requested an adjustment to allow the proposed private street cul-de-sac to exceed the 200-foot length standard by 420 feet, and to permit 23 homes on the cul-de-sac as opposed to the code maximum of 20 homes. These adjustments are discussed simultaneously in the following discussion.

**There are special circumstances or conditions affecting the property, which are unusual and peculiar to the land as compared to other lands similarly situated;**

In the case of the curb tight sidewalk, the site plan indicates the areas of sensitive resources, including Ash Creek, and the associated wetlands. If a 5-foot planter strip was required, then an approximate 1,100 additional square feet of impact to the drainageway and wetland areas would occur. The unusual circumstance for this property is the presence of the stream and the fact that the development is required to cross the stream for street connectivity. In areas outside of the resource corridor, the sidewalk will meet the public street standards for sidewalks. This criterion is satisfied.

In reference to the adjustment to allow the cul-de-sac length to exceed 200 feet as opposed to the proposed 620 feet, the presence of the sensitive lands and stream corridor limit the developable width of the property, such that a looped street system is not feasible. The presence of existing development to the south (Washington Square Estates), east (Washington Square Estates II), and north (the Raspberry Patch) precludes future street extensions. The applicant's plans propose a public street that will terminate at approximately 1/3 the total depth of the development site. While a connection further east could be accommodated, the applicant's proposal provides for future development potential of the northern lot, as well as, creates a better alignment for ultimate extension of SW 73<sup>rd</sup> Avenue. There are specific topography constraints, as well as existing development patterns that limit the ability of the applicant to extend a road all the way through the development to eliminate the cul-de-sac. The resulting length of this cul-de-sac is the primary reason for the need to exceed the 20 home maximum on the cul-de-sac to a total of 23 homes. This criterion is satisfied.

**The adjustment is necessary for the proper design or function of the subdivision;**

The adjustment for the curb tight sidewalk standard is necessary for the design of this subdivision to reduce impacts on the natural resources on the site. This criterion is satisfied.

The adjustment requested for the cul-de-sac length is necessary to provide access to lots 3-19 of this subdivision. A standard dimensioned cul-de-sac bulb has been proposed to serve emergency equipment and garbage trucks. This criterion is satisfied.

**The granting of the adjustment will not be detrimental to the public health, safety, and welfare or injurious to the rights of other owners of property; and**

Granting of the adjustments would not be detrimental to the health, safety and welfare, nor, is there any evidence to suggest that the adjustments would be injurious to the rights of other owners of property surrounding the site. The Fire District has reviewed and commented and offered no objection to these adjustments. The private street will be required to meet fire district standards for width and construction.

**The adjustment is necessary for the preservation and enjoyment of a substantial property right because of an extraordinary hardship, which would result from strict compliance with the regulations of this title.**

In order to develop the property in the proposed manner, the applicant would need to request the adjustments to the standards for street improvements and the cul-de-sac length. These adjustments are necessary in order to develop the property as proposed.

**FINDING:** The criteria for granting the adjustments to the street design and the cul-de-sac length standards have been satisfied. The adjustments are requested to accommodate this development specifically because of the natural resources and shape of the resulting buildable area of the lot, as well as the consideration of pre-existing development patterns in the area that would not permit compliance with the applicable chapters of the TDC.

**Zone Change: Standards for Making Quasi-Judicial Decisions: Chapter 18.380**

**A recommendation or a decision to approve, approve with conditions or to deny an application for a quasi-judicial zoning map amendment shall be based on all of the following standards:**

**Demonstration of compliance with all applicable comprehensive plan policies and map designations;**

The Development Code implements the goals and policies of the Comprehensive Plan and planned developments are permitted in all districts when they meet the code criteria of the Development Code. This criterion is satisfied.

**Demonstration of compliance with all applicable standards of any provision of this code or other applicable implementing ordinance; and**

According to the analysis of sections below, the proposed zone change is, or has been conditioned to ensure compliance with the requirements for planned development (PD) in Section 18.350.020 and all other applicable requirements.

**Evidence of change in the neighborhood or community or a mistake or inconsistency in the comprehensive plan or zoning map as it relates to the property which is the subject of the development application.**

There is no change in circumstances or inconsistencies to the Comprehensive Plan or Zoning Map that warrants a zone change from the underlying zone. However, a zone change is necessary to place the PD overlay designation on the property. This criterion is inapplicable.

**FINDING:** The proposal satisfies the criteria for a zone change to place the Planned Development Overlay zoning onto the property.

**Preliminary Subdivision Plat Approval Criteria: 18.430.040**

**Approval criteria:**

**The Approval Authority may approve, approve with conditions or deny a preliminary plat based on the following approval criteria:**

**The proposed preliminary plat complies with the applicable zoning ordinance and other applicable ordinances and regulations;**

As illustrated in this report, the proposed plat complies with the zoning ordinance and other applicable ordinances and regulations.

**The proposed plat name is not duplicative or otherwise satisfies the provisions of ORS Chapter 92;**

The applicant has not provided documentation of a plat name reservation; therefore, the applicant will need to provide an approved plat name reservation prior to final plat approval.

**The streets and roads are laid out so as to conform to the plats of subdivisions and maps of major partitions already approved for adjoining property as to width, general direction and in all other respects unless the City determines it is in the public interest to modify the street or road pattern; and**

There are no street stubs to this property from adjacent properties. Existing development and topography limits the ability for this applicant to provide stubs for future road service to adjacent properties to the east and south; however, a street stub has been provided for the property to the north, and extension of the improvements to SW 74<sup>th</sup> Avenue to the south is also proposed. This criterion has been met.

**An explanation has been provided for all common improvements.**

The applicant has provided an explanation for all common improvements.

**FINDING:** The proposed development complies with all preliminary subdivision criteria, however, the applicant will need to provide evidence that the plat name is not duplicative of others in Washington County.

**CONDITION:** Provide a plat name reservation approval from Washington County.

**ZONING DISTRICT**

**Residential Zoning District: Section 18.510.020**

**The R-4.5 zoning district is designed to accommodate detached single-family homes with or without accessory residential units at a minimum lot size of 7,500 square feet. Duplexes and attached single-family units are permitted conditionally. Some civic and institutional uses are also permitted conditionally.**

Planned Developments are permitted in all districts provided the application satisfies all applicable criteria.

**Development Standards: Section 18.510.050 States that Development standards in residential zoning districts are contained in Table 18.510.2 below:**

The subject site and the surrounding properties are all designated R-4.5, Low-Density Residential.

**EXCERPT FROM TABLE 18.510.2  
DEVELOPMENT STANDARDS IN RESIDENTIAL ZONES**

STANDARD	R-4.5	PROPOSED (PD)
Minimum Lot Size <ul style="list-style-type: none"><li>- Detached unit</li><li>- Duplexes</li><li>- Attached unit [1]</li></ul>	7,500 sq.ft. 10,000 sq.ft.	4,702-11,616 sq. ft. N/A N/A
Average Minimum Lot Width <ul style="list-style-type: none"><li>- Detached unit lots</li><li>- Duplex lots</li><li>- Attached unit lots</li></ul>	50 ft. 90 ft.	Varies 58 ft.+ N/A N/A
Maximum Lot Coverage	-	-
Minimum Setbacks <ul style="list-style-type: none"><li>- Front yard</li><li>- Side facing street on corner &amp; through lots</li><li>- Side yard</li><li>- Rear yard</li><li>- Side or rear yard abutting more restrictive zoning district</li><li>- Distance between property line and front of garage</li></ul>	20 ft.  15 ft. 5 ft. 15 ft.  20 ft.	8 ft.  15 ft. 3 ft. 15 ft. and 3 ft.  20 ft. and 22.5 ft.
Maximum Height	30 ft.	30 ft.
Minimum Landscape Requirement	-	20% For PD Overlay

[1] Single-family attached residential units permitted at one dwelling per lot with no more than five attached units in one grouping.

[2] Lot coverage includes all buildings and impervious surfaces.

**FINDING:** Since the proposed development is a Planned Development, these standards can be altered to fit a specific design. It should be noted that the applicant's narrative includes a table listing the various lot widths for each lot. The methodology utilized to establish these lot widths was incorrect. The width is measured at the front and rear yard setback and averaged to obtain the code specified lot width. In any case, the lot widths exceed the minimum requirement, and are authorized through the Planned Development process.

**ACCESS AND EGRESS: CHAPTER 18.705**

**Minimum access requirements for residential use: Section 18.705.030H.**

#### **Access Management (Section 18.705.030.H)**

**Section 18.705.030.H.1 states that an access report shall be submitted with all new development proposals which verifies design of driveways and streets are safe by meeting adequate stacking needs, sight distance and deceleration standards as set by ODOT, Washington County, the City and AASHTO.**

The applicant's engineer indicates that sight distance will be met. Staff recommends that the applicant's engineer provide a post-construction sight distance certification.

**Section 18.705.030.H.2 states that driveways shall not be permitted to be placed in the influence area of collector or arterial street intersections. Influence area of intersections is that area where queues of traffic commonly form on approach to an intersection. The minimum driveway setback from a collector or arterial street intersection shall be 150 feet, measured from the right-of-way line of the intersecting street to the throat of the proposed driveway. The setback may be greater depending upon the influence area, as determined from City Engineer review of a traffic impact report submitted by the applicant's traffic engineer. In a case where a project has less than 150 feet of street frontage, the applicant must explore any option for shared access with the adjacent parcel. If shared access is not possible or practical, the driveway shall be placed as far from the intersection as possible.**

74<sup>th</sup> Avenue is classified as a "Neighborhood Route". Taylor's Ferry Road is classified as a "Collector" street. The proposed new intersection of 74<sup>th</sup> Avenue and Street 'A' is not within the influence area of the 74<sup>th</sup> Avenue and Taylor's Ferry Road intersection.

**Section 18.705.030.H.3 and 4 states that the minimum spacing of driveways and streets along a collector shall be 200 feet. The minimum spacing of driveways and streets along an arterial shall be 600 feet. The minimum spacing of local streets along a local street shall be 125 feet.**

The proposed intersection is over 280 feet away from the intersection of 74<sup>th</sup> Avenue and Barbara Lane. Therefore, this standard is met.

**Vehicular access and egress for single-family, duplex or attached single-family dwelling units on individual lots and multi-family residential uses shall not be less than as provided in Table 18.705.1 and Table 18.705.2;**

**TABLE 18.705.1  
VEHICULAR ACCESS/EGRESS REQUIREMENTS:  
RESIDENTIAL USE (6 OR FEWER UNITS)**

<b>Dwelling Units</b>	<b>Minimum Number of Driveways Required</b>	<b>Minimum Access Width</b>	<b>Minimum Pavement Width</b>
1 or 2	1	15 feet	10 feet

The applicant has indicated in the narrative that each lot within the subdivision will have access to a public or private street and that each access will meet the 15-foot access requirement. It should be noted that staff will recommend a condition requiring joint access for lots 28 and 29, as discussed later in this report.

**FINDING:** All proposed lots will meet the required 15 feet of access frontage required for single-family dwellings. To ensure that the minimum width pavement requirement is met at the time of development of each parcel, the following condition shall apply:

**CONDITION:** At the time of application for building permits for individual homes, the applicant shall demonstrate that each site will be accessed by a minimum 10-foot-wide paved access.

**Vehicular access to multi-family structures shall be brought to within 50 feet of the ground floor entrance or the ground floor landing of a stairway, ramp, or elevator leading to the dwelling units.**

This is a proposal for a single-family development. This standard does not apply.

**Private residential access drives shall be provided and maintained in accordance with the provisions of the Uniform Fire Code.**

The individual homeowners will maintain the access drives once the property is developed and sold. The Tualatin Valley Fire and Rescue District has reviewed the proposal and the comments have been incorporated where necessary. This criterion is satisfied.

**Access drives in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus by one of the following:**

- ♦ **A circular, paved surface having a minimum turn radius measured from center point to outside edge of 35 feet;**
- ♦ **A hammerhead-configured, paved surface with each leg of the hammerhead having a minimum depth of 40 feet and a minimum width of 20 feet;**
- ♦ **The maximum cross slope of a required turnaround is 5%.**

There are no access drives proposed that would exceed 150 feet in length. This criterion has been met.

**Vehicle turnouts, (providing a minimum total driveway width of 24 feet for a distance of at least 30 feet), may be required so as to reduce the need for excessive vehicular backing motions in situations where two vehicles traveling in opposite directions meet on driveways in excess of 200 feet in length.**

There are no proposed driveways in this development that exceed 200 feet in length. The deepest lot in the proposed development is 165 feet, therefore, this criterion does not apply.

**Where permitted, minimum width for driveway approaches to arterials or collector streets shall be no less than 20 feet so as to avoid traffic turning from the street having to wait for traffic exiting the site.**

The site is not adjacent to a collector or arterial. This standard does not apply.

**To provide for increased traffic movement on congested streets and to eliminate turning movement problems, the Director may restrict the location of driveways on streets and require the location of driveways be placed on adjacent streets, upon the finding that the proposed access would cause or increase existing hazardous traffic conditions; or provide inadequate access for emergency vehicles; or cause hazardous conditions to exist which would constitute a clear and present danger to the public health, safety, and general welfare.**

Since SW 74<sup>th</sup> is designated a neighborhood route, and will eventually be extended to connect to SW Locust Street, it is anticipated that traffic volumes will increase on this presently dead-ended road. To minimize traffic conflicts in this area where driveways may be difficult to see due to the vertical curves near the stream crossing, staff recommends that the two southern lots, #28 and 29 share access through one driveway approach. This driveway is required to be a minimum of 10 feet of paved width within a 15-foot easement or tract.

**FINDING:** The proposed development can comply with all applicable access, egress, and circulation requirements of Chapter 18.705. Joint access for lots 28 and 29 will improve traffic safety by reducing the number of access points onto this neighborhood route street.

**CONDITIONS:**

- ♦ The applicant shall provide joint access within an easement or tract to Lots 28 and 29 and cause a statement to be placed on the plat restricting additional direct vehicular access to SW 74<sup>th</sup> Avenue.
- ♦ At the time of application for building permits for individual homes, the applicant shall demonstrate that each site will be accessed by a minimum 10-foot-wide paved access.

## **DENSITY COMPUTATIONS: CHAPTER 18.715**

### **Density Calculation: 18.715.020**

#### **Definition of net development area.**

Net development area, in acres, shall be determined by subtracting the following land area(s) from the gross acres, which is all of the land included in the legal description of the property to be developed:

- ♦ All sensitive land areas: a. Land within the 100-year floodplain; b. Land or slopes exceeding 25%; c. Drainage ways; and d. Wetlands.
- ♦ All land dedicated to the public for park purposes;
- ♦ All land dedicated for public rights-of-way. When actual information is not available, the following formulas may be used: Single-family development: allocate 20% of gross acreage; Multi-family development: allocate 15% of gross acreage.
- ♦ All land proposed for private streets; and
- ♦ A lot of at least the size required by the applicable base zoning district, if an existing dwelling is to remain on the site.

#### **Calculating maximum number of residential units.**

To calculate the maximum number of residential units per net acre, divide the number of square feet in the net acres by the minimum number of square feet required for each lot in the applicable zoning district.

The net development area is determined by subtracting from the gross area, the land needed for public and private streets as well as areas for sensitive lands. The calculations are as follows:

Gross lot area	407,721 square feet
Public Street dedication	17,828 square feet
Private Street dedication	22,670 square feet
Drainageway	70,862 square feet
Steep Slopes	107,556 square feet
Wetlands (wholly contained in drainageway)	
<b>NET DEVELOPABLE AREA:</b>	<b>188,805 square feet</b>
(Before Density Transfer)	

NUMBER OF LOTS: 25 lots

#### **Residential Density Transfer**

Rules governing residential density transfer. The units per acre calculated by subtracting land areas listed in Section 18.715.020 A. 1a - c from the gross acres may be transferred to the remaining buildable land areas subject to the following limitations:

1. The number of units which can be transferred is limited to the number of units which would have been allowed on 25 percent of the unbuildable area if not for these regulations; and
2. The total number of units per site does not exceed 125 percent of the maximum number of units per gross acre permitted for the applicable comprehensive plan designation.

Based on the rules for density transfer, the applicant is able to utilize 25% of the constrained lands as part of the net developable area. In this case, the drainageway and steep slopes constitute a total of 178,418 square feet. Twenty-five percent of this area is 44,604 square feet, for a total net developable area of 233,409 square feet.

To calculate the maximum allowed density, net developable area is divided by the minimum allowed square footage within the zone, as follows:

R-4.5 zone  
 $233,409 \div 7,500 = 31$  dwelling units.

The total number of units based on 125% of the gross site acreage would be 25 lots x 125%, or 31 lots.

**FINDING:** The proposed 29 dwelling units do not exceed maximum density of the net developable area. This standard is met.



**Calculating minimum number of residential units.**

As required by Section 18.510.040, the minimum number of residential units per net acre shall be calculated by multiplying the maximum number of units determined in Subsection B above by 80% (0.8).

The minimum required density is determined by the following calculation:

$$25 \times 0.80 = 20$$

FINDING: The standard for minimum density is met.

**ENVIRONMENTAL PERFORMANCE STANDARDS: CHAPTER 18.725**

These standards require that federal and state environmental laws, rules and regulations be applied to development within the City of Tigard. Section 18.725.030 (Performance Standards) regulates: Noise, visible emissions, vibration and odors.

**Noise.** For the purposes of noise regulation, the provisions of Sections 7.41.130 through 7.40.210 of the Tigard Municipal Code shall apply.

**Visible Emissions.** Within the commercial zoning districts and the industrial park (IP) zoning district, there shall be no use, operation or activity which results in a stack or other point-source emission, other than an emission from space heating, or the emission of pure uncombined water (steam) which is visible from a property line. Department of Environmental Quality (DEQ) rules for visible emissions (340-21-015 and 340-28-070) apply.

**Vibration.** No vibration other than that caused by highway vehicles, trains and aircraft is permitted in any given zoning district which is discernible without instruments at the property line of the use concerned.

**Odors.** The emissions of odorous gases or other matter in such quantities as to be readily detectable at any point beyond the property line of the use creating the odors is prohibited. DEQ rules for odors (340-028-090) apply.

**Glare and heat.** No direct or sky reflected glare, whether from floodlights or from high temperature processes such as combustion or welding, which is visible at the lot line shall be permitted, and; 1) there shall be no emission or transmission of heat or heated air which is discernible at the lot line of the source; and 2) these regulations shall not apply to signs or floodlights in parking areas or construction equipment at the time of construction or excavation work otherwise permitted by this title.

**Insects and rodents.** All materials including wastes shall be stored and all grounds shall be maintained in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard.

This is a detached single-family project, which is permitted within planned developments in the R-4.5 zone. There is nothing to indicate that these standards will not be met. However, ongoing maintenance to meet these standards shall be maintained and any violation of these standards will be addressed by the City of Tigard's Code Enforcement Officer.

FINDING: The Environmental Performance standards are met.

**LANDSCAPING AND SCREENING: CHAPTER 18.745**

**Establishes standards for landscaping, buffering and screening to enhance the aesthetic environmental quality of the City.**

The R-4.5 zoning district does not require any landscaping, however, planned developments require that a minimum of 20% of the site be landscaped. As discussed previously, the common areas that are to be landscaped constitute 27% of the site, and additional landscaping will be planted with the development of each lot.

**Section 18.745.040.** states that all development projects fronting on a public street, private street, or a private driveway more than 100 feet in length after the adoption of this title shall be required to plant street trees in accordance with the standards in Section 18.745.040C.

The applicant has provided a street tree plan for the development to include the planting of 62 Red Sunset Maples along the front of the lots facing the public and private street and along the site frontage along SW 74<sup>th</sup> Avenue. The proposed street trees are acceptable species; however, staff recommends a greater variety of trees be used by utilizing an alternate species along either the public or private street. This will further distinguish the private from the public street as well. With the change outlined above, this criterion is satisfied.

**FINDING:** The proposed street tree plan should offer a greater diversity of tree species.

**CONDITION:** Submit a revised street tree/landscape plan that shows an alternative tree species used for either the public or private street to vary the streetscape.

**Buffering and Screening - Section 18.745.050**

**Buffering and screening is required to reduce the impacts on adjacent uses which are of a different type in accordance with the matrices in this chapter (Tables 18.745.1 and 18.745.2).**

The subject site is surrounded by single-family developments; therefore, there is no requirement for buffering and screening for this project.

**FINDING:** As conditioned, the proposed development will comply with all applicable Landscaping and Screening requirements of Chapter 18.745.

**MIXED SOLID WASTE AND RECYCLABLE STORAGE: CHAPTER 18.755**

Although listed as a review criterion for this application, this chapter is only applicable to multi-unit residential buildings containing five or more units and non-residential construction. Therefore, this chapter is inapplicable. The applicant has stated that they intend to serve the site as any other single-family development would be served, and Pride Disposal has signed off on the site plan for serviceability.

**OFF-STREET PARKING AND LOADING REQUIREMENTS: CHAPTER 18.765**

**This Chapter is applicable for development projects when there is new construction, expansion of existing use, or change of use in accordance with Section 18.765.070 Minimum and Maximum Off-Street Parking Requirements.**

The proposed project will create 29 lots for single-family dwellings. Submittals of detailed plans for the construction of homes within the development are not necessary at this time. Table 18.765.2 requires that one (1) off-street parking space be provided per detached dwelling unit. There is no maximum limit on parking allowed for detached single-family dwellings. There is also no bicycle parking requirement for single-family dwellings. Staff notes that there is a 20-foot required setback from the face of garages to property lines in all residential zones. To ensure that homes constructed in this development comply with these standards, the following condition shall apply:

**CONDITION:** At the time of submittal for building permits for individual homes within the development, the developer shall submit materials demonstrating that one (1) off-street parking space, which meets minimum dimensional requirements and setback requirements as specified in Title 18, will be provided on-site for each new home.

**SENSITIVE LANDS: CHAPTER 18.775**

The development site includes area of drainageways, associated wetlands, and steep slopes. Development of sites that include these areas requires review through the sensitive lands criteria as described below.

**Jurisdictional wetlands. Landform alterations or developments which are only within wetland areas that meet the jurisdictional requirements and permit criteria of the U.S. Army Corps of Engineers, Division of State Lands, CWS, and/or other federal, state, or regional agencies, and are not designated as significant wetlands on the City of Tigard Wetland and Streams Corridors Map., do not require a sensitive lands permit. The City shall require that all necessary permits from other agencies are obtained. All other applicable City requirements**

must be satisfied, including sensitive land permits for areas within the 100-year floodplain, slopes of 25% or greater or unstable ground, drainageways, and wetlands which are not under state or federal jurisdiction.

The wetlands within this site do not appear as significant wetlands on the City's map, but are regulated by CWS and state agencies. A condition of approval will be imposed requiring the necessary permits from Army Corps, Division of State Lands, and CWS be obtained.

**Steep slopes.** The appropriate approval authority shall approve, approve with conditions or deny an application request for a sensitive lands permit on slopes of 25% or greater or unstable ground based upon findings that all of the following criteria have been satisfied:

1. The extent and nature of the proposed land form alteration or development will not create site disturbances to an extent greater than that required for the use;
2. The proposed land form alteration or development will not result in erosion, stream sedimentation, ground instability, or other adverse on-site and off-site effects or hazards to life or property;
3. The structures are appropriately sited and designed to ensure structural stability and proper drainage of foundation and crawl space areas for development with any of the following soil conditions: wet/high water table; high shrink-swell capability; compressible/organic; and shallow depth-to-bedrock; and
4. Where natural vegetation has been removed due to land form alteration or development, the areas not covered by structures or impervious surfaces will be replanted to prevent erosion in accordance with Chapter 18.745, Landscaping and Screening.

The proposed land form alteration is limited to the extent necessary to provide for a street, sidewalk, and utilities. The applicant has attempted to limit the land alteration by narrowing the street, eliminating the sidewalk on one side of the private street, and reducing front yard setbacks. The predominance of the landform alteration will occur outside the stream corridor and drainageway. Also, a geotechnical report has been performed. An erosion control and grading plan will be required as part of the engineering approval process to insure that grading within the steep slope areas will not result in sedimentation or erosion, as well as avoid on or off-site adverse effects. Furthermore, the City will require the applicant's engineer to submit the proposed construction plans to the geotechnical engineer for review and approval prior to City approval of the construction plans. A geotechnical report has been conducted to evaluate the suitability of the lots for building placement. The geotech report provides a designated area where no further geotechnical evaluation is necessary, and areas where a more detailed analysis will be required. This designation affects a portion of the private street and lots 13, 14, 15, 22, and 23. A condition is required further in this report to have the geotechnical engineer review the proposed grading and building placements prior to final plat approval for these areas. To address erosion concerns and removal of vegetation, the applicant will be required to submit an erosion control plan prior to any grading. The applicant has not indicated that areas affected by landform alterations will be re-planted if not covered by structures or impervious surfaces, however, this will be insured by the erosion control plan and a condition requiring areas to be re-planted prior to final building permits will be required as part of this approval, and is furthermore required through the CWS service provider letter.

**Within drainageways.** The appropriate approval authority shall approve, approve with conditions or deny an application request for a sensitive lands permit within drainageways based upon findings that all of the following criteria have been satisfied:

1. The extent and nature of the proposed land form alteration or development will not create site disturbances to an extent greater than that required for the use;

In this case, the landform alteration will include a stream crossing to extend SW 74<sup>th</sup> Avenue. This is a requirement of the City to improve the site frontage, provide access to the two proposed lots, and further implement the objectives of the City's Transportation System Plan which designates SW 74<sup>th</sup> as a neighborhood route. The applicant has proposed a small retaining wall to minimize the amount of fill in the stream corridor. The extent of the disturbance is no greater than that required for the roadway. No disturbance within the drainageway is proposed to accommodate the lots or internal streets.

2. The proposed land form alteration or development will not result in erosion, stream sedimentation, ground instability, or other adverse on-site and off-site effects or hazards to life or property;

As described previously, an erosion control and grading plan will be required as part of the engineering approval process to insure that grading within the steep slope areas will not result in sedimentation or erosion, as well as avoid on or off-site adverse effects. Furthermore, the City will require the applicant's engineer to submit the proposed construction plans to the geotechnical engineer for review and approval prior to City approval of the construction plans.

**3. The water flow capacity of the drainageway is not decreased;**

The applicant has submitted a stormwater report that shows that the capacity of the drainageway is not affected. The applicant has proposed using an oversized box culvert to ensure that upstream properties are not affected.

**4. Where natural vegetation has been removed due to land form alteration or development, the areas not covered by structures or impervious surfaces will be replanted to prevent erosion in accordance with Chapter 18.745, Landscaping and Screening;**

To address erosion concerns and removal of vegetation, the applicant will be required to submit an erosion control plan prior to any grading. The applicant has not indicated that areas affected by landform alterations will be re-planted if not covered by structures or impervious surfaces, however, this will be insured by the erosion control plan and a condition requiring areas to be re-planted prior to final building permits will be required as part of this approval, and is furthermore required through the CWS service provider letter.

**5. The drainageway will be replaced by a public facility of adequate size to accommodate maximum flow in accordance with the adopted 1981 Master Drainage Plan;**

The 1981 Master Drainage Plan does not identify any public facilities for this portion of Ash Creek.

**6. The necessary U.S. Army Corps of Engineers and State of Oregon Land Board, Division of State Lands, and CWS approvals shall be obtained;**

The applicant has shown approvals from Clean Water Services, but has not yet obtained U.S. Army Corps of Engineers, and Division of State Lands approvals. These will be required prior to commencing any site work.

**7. Where land form alterations and/or development are allowed within and adjacent to the 100-year floodplain, the City shall require the consideration of dedication of sufficient open land area within and adjacent to the floodplain in accordance with the Comprehensive Plan. This area shall include portions of a suitable elevation for the construction of a pedestrian/bicycle pathway within the floodplain in accordance with the adopted pedestrian bicycle pathway plan.**

There is no 100-year floodplain within or adjacent to the proposed development. This standard is inapplicable.

**FINDING:** Provided the applicant complies with the following conditions, the proposal can meet the criteria necessary to issue a sensitive lands permit on this particular site.

**CONDITIONS:**

- Prior to the issuance of final occupancy on any building, the applicant must provide City staff with a letter from Clean Water Services that indicates compliance with the approved service provider letter (#2819).
- Prior to any site work, the applicant shall provide evidence of all necessary approvals from US Army Corps of Engineers and the Division of State Lands.
- Prior to any site work, the drainage tract must be clearly identified in the field with permanent (preferably with minimum 4-foot-tall black chainlink) fencing so as to insure no grading or material is placed in this area. Any fencing that is damaged during construction must be replaced prior to final building inspection.

- Prior to final plat approval submit and receive approval for an erosion control and grading plan for alteration on slopes exceeding 25%.
- Re-plant any area where vegetation has been removed as a result of grading in conformance with the Clean Water Services Standards as set forth in the site assessment file #2819, prior to obtaining building permits.
- Prior to commencing on site improvements, the applicant shall have the geotech engineer review and approve the construction plans for the City's review and approval.

#### **TREE REMOVAL: CHAPTER 18.790**

**A tree plan for the planting, removal and protection of trees prepared by a certified arborist shall be provided with a site development review application. The tree plan shall include identification of all existing trees, identification of a program to save existing trees or mitigate tree removal over 12 inches in caliper, which trees are to be removed, protection program defining standards and methods that will be used by the applicant to protect trees during and after construction.**

The applicant indicates in his narrative that the property is subject to a timber deferral status and the owner has elected to remove all of the trees on the property that are outside the sensitive lands areas as provided for in the Development Code, Section 18.790.050 (D)(4). There are several trees that are indicated for removal within the sensitive lands areas, and these trees will require separate tree removal permits. Staff estimates that there are 74 such trees. The applicant should note that a separate fee is required for each tree removal in a sensitive land area and based on the estimate and current permit fees, this equates to \$4,200. The applicant will need to demonstrate compliance with the removal criteria in Section 18.790.050(A).

The applicant has not submitted an arborist report regarding the protection of the trees that will remain on site.

**FINDING** The applicant has provided a tree removal plan indicating the trees proposed for removal. There are approximately 74 trees in sensitive land areas that will require tree removal permits. No arborist report to address the protection of the remaining trees on site has been submitted. To ensure that the trees are preserved according to the tree removal plan, the following conditions shall apply:

#### **CONDITIONS:**

- The applicant shall submit an arborist report with tree protection recommendations, and shall provide the City Arborist with a construction sequence including installation and removal of tree protection devices, clearing, grading, and paving.
- Prior to site work, the applicant shall submit a complete set of construction documents with the tree locations for the City Arborists review.
- The applicant shall notify the City Arborist when tree protection measures are in place so that he may verify that the measures will function properly prior to construction.

#### **Visual Clearance Areas: Section 18.795**

**Clear vision area shall be maintained on the corners of all property adjacent to intersection of two streets, a street and a railroad, or a driveway providing access to a public or private street. A clear vision area shall contain no vehicle, hedge, planting, fence, wall structure, or temporary or permanent obstruction exceeding three (3) feet in height, measured from the top of the curb, or where no curb exists, from the street center grade, except the trees exceeding this height may be located in this area, provided all branches below eight feet are removed. For arterial streets the visual clearance shall not be less than 35 feet on each side of the intersection.**

No specific plans for the construction of structures are required through the subdivision process. Compliance with vision clearance requirements shall be confirmed through the building permit process for all homes to be constructed within the development. The applicant has illustrated the clear vision areas on the plans and included details at a larger scale for the intersection of the private street at the new public street, and at the new public street and SW 74<sup>th</sup> Avenue, and has indicated in the narrative that there will be no obstructions placed within these areas. This standard is met.

**G. IMPACT STUDY: SECTION 18.390.040.B.e**

Requires that the applicant shall include an impact study. The study shall address, at a minimum, the transportation system, including bikeways, the drainage system, the parks system, the water system, the sewer system, and the noise impacts of the development. For each public facility system and type of impact of the development on the public at large, public facilities systems, and affected private property users. In situations where the Community Development Code requires the dedication of real property interests, the applicant shall either specifically concur with the dedication of real property interest, or provide evidence which supports the conclusion that the real property dedication requirement is not roughly proportional to the projected impacts of the development.

The applicant has submitted an impact study addressing the required elements above.

**ROUGH PROPORTIONALITY ANALYSIS**

Any required street improvements to certain collector or higher volume streets and the Washington County Traffic Impact Fee (TIF) are mitigation measures that are required at the time of development. Based on a transportation impact study prepared by Mr. David Larson for the A-Boy Expansion/Dolan II/Resolution 95-61, TIF's are expected to recapture 32 percent of the traffic impact of new development on the Collector and Arterial Street system. Effective July 1, 2003, the TIF for a detached, single-family dwelling is \$2,530. Upon completion of this development, the future builders of the residences will be required to pay TIF's totaling approximately \$73,370 (\$2,530 x 29 dwelling units). Based on the estimate that total TIF fees cover 32 percent of the impact on major street improvements citywide, a fee that would cover 100 percent of this projects traffic impact is \$229,281 (\$73,370 divided by .32). The difference between the TIF paid and the full impact, is considered as unmitigated impact.

The internal streets within the subdivision are needed to allow the subdivision to develop and the need for these streets is created by the subdivision. Because the need for the internal streets is created by the development, the impact of the development is directly proportional to the cost of dedication and construction of the internal streets and not considered as mitigation for the development impact.

With regard to off site mitigation measures, the applicant is proposing to make ¾ -street improvements and provide a crossing over Ash Creek. The applicant's estimated cost of these street improvements along SW 74<sup>th</sup> Avenue is \$250,000. Using the City's standard methodology, the amount of mitigation provided through the applicant's street improvements exceeds the estimated value of the full impact from this development by approximately \$94,000. This is not roughly proportionate to the impact of the development; however, it is required for the proper function of the applicant's subdivision, to provide access to the lots within the subdivision, and the applicant has proposed this improvement.

With regard to the dedication of real property interests, the applicant will be required to dedicate an additional 2 feet of right of way totaling 842 square feet for a total value of approximately \$2,526. This amount of real property dedication is roughly proportionate to the full \$229,281 impact. Although the cost of the physical improvements exceed the full impact, the applicant has proposed these improvements and is required to provide them in order to satisfy the standards of the street improvement chapter.

Full Impact .....	(73,370÷0.32)	\$229,281
Less TIF Assessment.....	(29 lots x \$2,530)	-\$73,370
Less mitigated costs 74 <sup>th</sup> Street Improvement.....		-\$250,000
Estimate of Unmitigated Impacts		-\$155,911

**FINDING:** The applicant's proposed street improvements are required to address the standards of Chapter 18.810 and to allow the subdivision to function properly. While the cost of these improvements is not proportionate to the level of impact, the improvements have been proposed by the applicant. The required dedication of right of way is clearly proportionate to the impact of the creation of these 29 lots. Therefore, the conditions are either roughly proportionate to the impacts sustained or required to meet the code standards and are thereby justified.

#### **STREET AND UTILITY IMPROVEMENTS STANDARDS: CHAPTER 18.810**

**Chapter 18.810 provides construction standards for the implementation of public and private facilities and utilities such as streets, sewers, and drainage. The applicable standards are addressed below:**

##### **Streets:**

##### **Improvements:**

**Section 18.810.030.A.1 states that streets within a development and streets adjacent shall be improved in accordance with the TDC standards.**

**Section 18.810.030.A.2 states that any new street or additional street width planned as a portion of an existing street shall be dedicated and improved in accordance with the TDC.**

**Minimum Rights-of-Way and Street Widths: Section 18.810.030(E) requires a neighborhood route street to have a 54-foot right-of-way width and a 32-foot paved section. Other improvements required may include on-street parking, sidewalks and bikeways, underground utilities, street lighting, storm drainage, and street trees.**

##### **SW 74<sup>th</sup> Avenue**

This site lies adjacent to SW 74<sup>th</sup> Avenue, which is classified as a Neighborhood Route on the City of Tigard Transportation Plan Map. At present, there is approximately 25 feet of ROW from centerline, according to the most recent tax assessor's map. The applicant is proposing to dedicate additional ROW to provide 27 feet from centerline.

SW 74<sup>th</sup> Avenue is currently unimproved. There is an existing drainage way that crosses 74<sup>th</sup> Avenue just south of the proposed intersection. There is also a 36-inch water transmission line, owned and operated by the City of Tualatin. The applicant's engineer found that if he designed the roadway to meet Tigard's standard for a sag vertical curve it would require significant fill to be placed over the water line. The City of Tualatin was not in favor of this amount of fill. Another issue is the fact that the more fill that is placed in the sag curve the more impact the fill has on the drainage way wetland area. The applicant and his engineer met with representatives from Tigard, Tualatin and Tualatin Valley Water District to discuss this issue. All parties agreed that the applicant should be permitted to construct 74<sup>th</sup> Avenue with a steeper grade than the standard in order to minimize the impact on the water line and the wetlands. The applicant would be required to apply for an adjustment to the grade standard. This discussion will be covered later in this report. The result of the applicant's design proposal is that they will be constructing a 3/4-street improvement along the frontage of their site.

##### **Adjustment for Curb-tight Sidewalk:**

Because of the stream corridor and associated wetlands that traverse the proposed street crossing of SW 74<sup>th</sup> Avenue, the applicant would like to move the sidewalk to curb-tight to reduce the width of the street and the resulting amount of fill required to build the street. By placing the sidewalk curb tight, 5 fewer feet of width into the stream corridor is avoided. Adjustments to street standards are covered under TDC 18.370.020.C.11, where the Director must find that the following criterion is satisfied:

*"Strict application of the standards will result in an unacceptably adverse impact on existing development, on the proposed development, or on natural features such as wetlands, steep slopes or existing mature trees. In approving an adjustment to the standards, the Director shall determine that the potential adverse impacts exceed the public benefits of strict application of the standards."*



The drainageway and wetlands in Tract A adjacent to the roadway cannot be avoided while still providing for the street connection. The applicant has reduced the street section to the minimum width of 24 feet and has proposed a retaining wall to limit the amount of fill and protect the roadbed from undermining and erosion. By moving the sidewalk to the curb line, the required planting strip is eliminated; however, additional preservation of wetlands, the stream corridor, and existing mature trees will result. Staff finds that the adjustment would not adversely affect the public benefits, as citizens often comment that they do not like to see mature trees being removed with development. The applicant has proposed planting street trees on the outside of the sidewalk to maintain the street tree planting scheme. Staff recommends approval of this adjustment.

**Future Street Plan and Extension of Streets:** Section 18.810.030(F) states that a future street plan shall be filed which shows the pattern of existing and proposed future streets from the boundaries of the proposed land division. This section also states that where it is necessary to give access or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary lines of the tract to be developed and a barricade shall be constructed at the end of the street. These street stubs to adjoining properties are not considered to be cul-de-sacs since they are intended to continue as through streets at such time as the adjoining property is developed. A barricade shall be constructed at the end of the street by the property owners which shall not be removed until authorized by the City Engineer, the cost of which shall be included in the street construction cost. Temporary hammerhead turnouts or temporary cul-de-sac bulbs shall be constructed for stub streets in excess of 150 feet in length.

The applicant's plan shows that they will stub a public street to the parcel to the north. The location of this street stub will accommodate effective development of this parcel. Staff concurs with the proposed plan.

**Street Alignment and Connections:** Section 18.810.030(G) states that staggering of streets making "T" intersections at collectors and arterials shall not be designed so that jogs of less than 300 feet on such streets are created, as measured from the centerline of such street. Spacing between local street intersections shall have a minimum separation of 125 feet. All local streets which abut a development site shall be extended within the site to provide through circulation when not precluded by environmental or topographical constraints, existing development patterns or strict adherence to other standards in this code. A street connection or extension is precluded when it is not possible to redesign, or reconfigure the street pattern to provide required extensions. In the case of environmental or topographical constraints, the mere presence of a constraint is not sufficient to show that a street connection is not possible. The applicant must show why the constraint precludes some reasonable street connection.

As was stated above, the steep slopes and creek to the south preclude extension of a public or private roadway further to the west. No public street connection is proposed to the east due to the fact that all parcels around that part of the site are fully developed with no street extensions available to this site.

**Cul-de-sacs:** 18.810.030.K states that a cul-de-sac shall be no more than 200 feet long, shall not provide access to greater than 20 dwelling units, and shall only be used when environmental or topographical constraints, existing development pattern, or strict adherence to other standards in this code preclude street extension and through circulation:

- ♦ All cul-de-sacs shall terminate with a turnaround. Use of turnaround configurations other than circular, shall be approved by the City Engineer; and
- ♦ The length of the cul-de-sac shall be measured along the centerline of the roadway from the near side of the intersecting street to the farthest point of the cul-de-sac.
- ♦ If a cul-de-sac is more than 300 feet long, a lighted direct pathway to an adjacent street may be required to be provided and dedicated to the City.

The applicant is proposing a private street cul-de-sac that will be approximately 600 feet long. The applicant has asked for an adjustment to the standard. Adjustments to provisions under 18.810 are covered under 18.370.020.C.11, which states:



*"The director shall approve, approve with conditions, or deny a request for an adjustment to the street improvement requirements, based on findings that the adverse impact on existing development, on the proposed development, or on natural features such as wetlands, steep slopes or existing mature trees. In approving an adjustment to the standards, the Director shall determine that the potential adverse impacts exceed the public benefits of strict application of the standards".*

The applicant states that no practical alternatives are available to provide reasonable and efficient access to the entire property.

The applicant proposes a private street that would have a length of approximately 500 feet. Again, the adjustment criteria found in TDC 18.370.020.C.11 applies:

*"Strict application of the standards will result in an unacceptably adverse impact on existing development, on the proposed development, or on natural features such as wetlands, steep slopes or existing mature trees. In approving an adjustment to the standards, the Director shall determine that the potential adverse impacts exceed the public benefits of strict application of the standards."*

The site is over 967 feet deep, which poses a challenge immediately when it comes to serving developable lots with street frontage. In addition, as was mentioned before, the steep slopes and creek to the south preclude any connection to the south. Existing development to the north and east also preclude street connections. Therefore, in order to serve the developable portion of this site, a street of over 200 feet is necessary. The impacts to the steep slopes and creek channel would exceed any perceived public benefit of a through street, especially when this street will only serve a total of 29 homes. Staff supports this adjustment.

**Grades and Curves:** Section 18.810.030.M states that grades shall not exceed ten percent on arterials, 12% on collector streets, or 12% on any other street (except that local or residential access streets may have segments with grades up to 15% for distances of no greater than 250 feet), and:

The applicant has applied for an adjustment to this standard, but review of their submittal shows that the proposed street grade does not exceed 15% for over 250 feet. Therefore, an adjustment is not required.

**Private Streets:** Section 18.810.030.S states that design standards for private streets shall be established by the City Engineer. The City shall require legal assurances for the continued maintenance of private streets, such as a recorded maintenance agreement. Private streets serving more than six dwelling units are permitted only within planned developments, mobile home parks, and multi-family residential developments.

The applicant is proposing to serve lots 2-23 with a private street. Because this development is proposed as a planned development a private street is acceptable.

The applicant shall place a statement on the face of the final plat indicating the private street(s) will be owned and maintained by the properties that will be served by it/them. In addition, the applicant shall record Conditions, Covenants and Restrictions (CC&R's) along with the final plat that will clarify how the private property owners are to maintain the private street(s). These CC&R's shall be reviewed and approved by the City prior to approval of the final plat. The City's public improvement design standards require private streets to have a pavement section equal to a public local street. The applicant will need to provide this type of pavement section.

**Block Designs -** Section 18.810.040.A states that the length, width and shape of blocks shall be designed with due regard to providing adequate building sites for the use contemplated, consideration of needs for convenient access, circulation, control and safety of street traffic and recognition of limitations and opportunities of topography.

**Block Sizes:** Section 18.810.040.B.1 states that the perimeter of blocks formed by streets shall not exceed 1,800 feet measured along the right-of-way line except:

- Where street location is precluded by natural topography, wetlands or other bodies of water or, pre-existing development or;

- ♦ For blocks adjacent to arterial streets, limited access highways, major collectors or railroads.
- ♦ For non-residential blocks in which internal public circulation provides equivalent access.

Because of pre-existing adjacent development and the stream corridor, there are no further opportunities for connections. The applicant's proposed street stub to the north will eventually provide a block measuring approximately 1,250 feet. This standard is met.

**Section 18.810.040.B.2** also states that bicycle and pedestrian connections on public easements or right-of-ways shall be provided when full street connection is not possible. Spacing between connections shall be no more than 330 feet, except where precluded by environmental or topographical constraints, existing development patterns, or strict adherence to other standards in the code.

The applicant has proposed to serve the site with a sidewalk on one side of the private street, and to stub a pedestrian connection with the street stub to the north. There are no opportunities for a pedestrian connection to the east or south due to pre existing development patterns. This standard is satisfied.

**Lots - Size and Shape:** Section 18.810.060(A) prohibits lot depth from being more than 2.5 times the average lot width, unless the parcel is less than 1.5 times the minimum lot size of the applicable zoning district.

Only one lot exceeds 1.5 times the minimum lot size, however this lot (#13) is 69 feet in average width which is less than 2.5 times the lot depth of 170 feet. This standard is satisfied.

**Lot Frontage:** Section 18.810.060(B) requires that lots have at least 25 feet of frontage on public or private streets, other than an alley. In the case of a land partition, 18.420.050.A.4.c applies, which requires a parcel to either have a minimum 15-foot frontage or a minimum 15-foot wide recorded access easement. In cases where the lot is for an attached single-family dwelling unit, the frontage shall be at least 15 feet.

There are several lots around the cul-de-sac that have less than 25 feet of frontage. This will need to be revised on the final plat so that all lots meet the minimum 25-foot standard. All other lots with the exception of lot 29 have 25 feet of frontage onto a public or private street. This is not a standard that can be deviated from through the planned development process. This criterion is not satisfied.

**FINDING:** Lots 9, 11, 12, and 29 do not have 25 feet of frontage on a public or private street.

**CONDITION:** Prior to approval of the final plat, the applicant shall revise the plat to accommodate a minimum of 25 feet of frontage for all lots within the development.

**Sidewalks:** Section 18.810.070.A requires that sidewalks be constructed to meet City design standards and be located on both sides of arterial, collector and local residential streets.

The applicant is proposing to construct sidewalks with their street improvements. This meets the standard.

#### **Sanitary Sewers:**

**Sewers Required:** Section 18.810.090.A requires that sanitary sewer be installed to serve each new development and to connect developments to existing mains in accordance with the provisions set forth in Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Services in 1996 and including any future revisions or amendments) and the adopted policies of the comprehensive plan.

**Over-sizing:** Section 18.810.090.C states that proposed sewer systems shall include consideration of additional development within the area as projected by the Comprehensive Plan.

There is an existing sewer manhole in 74<sup>th</sup> Avenue. The applicant is proposing to extend the 8 inch line north in 74<sup>th</sup> Avenue and then east in the new public and private streets to serve all lots. They are stubbing a line to the north for extension with future street improvements.

**Storm Drainage:**

**General Provisions:** Section 18.810.100.A states requires developers to make adequate provisions for storm water and flood water runoff.

**Accommodation of Upstream Drainage:** Section 18.810.100.C states that a culvert or other drainage facility shall be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the development. The City Engineer shall approve the necessary size of the facility, based on the provisions of Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Services in 2000 and including any future revisions or amendments).

There is a creek on the south portion of the property. The applicant is protecting that creek by setting the development away from the sensitive area boundary in accordance with CWS standards. The drainage way will have no impact on the proposed new lots.

**Effect on Downstream Drainage:** Section 18.810.100.D states that where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the Director and Engineer shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with the Design and Construction Standards for Sanitary and Surface Water Management (as adopted by Clean Water Services in 2000 and including any future revisions or amendments).

In 1997, Clean Water Services (CWS) completed a basin study of Fanno Creek and adopted the Fanno Creek Watershed Management Plan. Section V of that plan includes a recommendation that local governments institute a stormwater detention/effective impervious area reduction program resulting in no net increase in storm peak flows up to the 25-year event. The City will require that all new developments resulting in an increase of impervious surfaces provide onsite detention facilities, unless the development is located adjacent to Fanno Creek. For those developments adjacent to Fanno Creek, the storm water runoff will be permitted to discharge without detention.

The site slopes to the south towards Ash Creek. The applicant has shown a new public storm system located within the proposed public and private streets. They have also shown that a stub for future connection will be provided to the north, serving the future north-south street. The storm system will outlet to a pond that will provide both water quantity and quality measures, in accordance with CWS standards, prior to discharging to Ash Creek. The applicant will need to provide access to the pond for maintenance.

The applicant is also proposing to construct a 5-foot by 10-foot box culvert under 74<sup>th</sup> Avenue to accommodate the crossing of Ash Creek.

**Bikeways and Pedestrian Pathways:**

**Bikeway Extension:** Section 18.810.110.A states that developments adjoining proposed bikeways identified on the City's adopted pedestrian/bikeway plan shall include provisions for the future extension of such bikeways through the dedication of easements or right-of-way.

74<sup>th</sup> Avenue is not classified as a bike facility.

**Cost of Construction:** Section 18.810.110.B states that development permits issued for planned unit developments, conditional use permits, subdivisions, and other developments which will principally benefit from such bikeways shall be conditioned to include the cost or construction of bikeway improvements.

This standard is not applicable.

**Minimum Width:** Section 18.810.110.C states that the minimum width for bikeways within the roadway is five feet per bicycle travel lane. Minimum width for two-way bikeways separated from the road is eight feet.

This standard is not applicable.

**Utilities:**

Section 18.810.120 states that all utility lines, but not limited to those required for electric, communication, lighting and cable television services and related facilities shall be placed underground, except for surface mounted transformers, surface mounted connection boxes and meter cabinets which may be placed above ground, temporary utility service facilities during construction, high capacity electric lines operating at 50,000 volts or above, and:

- ♦ The developer shall make all necessary arrangements with the serving utility to provide the underground services;
- ♦ The City reserves the right to approve location of all surface mounted facilities;
- ♦ All underground utilities, including sanitary sewers and storm drains installed in streets by the developer, shall be constructed prior to the surfacing of the streets; and
- ♦ Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

**Exception to Under-Grounding Requirement:** Section 18.810.120.C states that a developer shall pay a fee in-lieu of under-grounding costs when the development is proposed to take place on a street where existing utilities which are not underground will serve the development and the approval authority determines that the cost and technical difficulty of under-grounding the utilities outweighs the benefit of under-grounding in conjunction with the development. The determination shall be on a case-by-case basis. The most common, but not the only, such situation is a short frontage development for which under-grounding would result in the placement of additional poles, rather than the removal of above-ground utilities facilities. An applicant for a development which is served by utilities which are not underground and which are located across a public right-of-way from the applicant's property shall pay a fee in-lieu of under-grounding.

There are existing overhead utility lines along the frontage of SW 74<sup>th</sup> Avenue. If the fee in-lieu is proposed, it is equal to \$27.50 per lineal foot of street frontage that contains the overhead lines. The frontage along this site is 421 lineal feet; therefore the fee would be \$ 11,578.

**ADDITIONAL CITY AND/OR AGENCY CONCERNS WITH STREET AND UTILITY IMPROVEMENT STANDARDS:**

**Traffic Study Findings:**

A Traffic Impact Report was submitted by CTS Engineers, Inc., dated April 30, 2003. CTS analyzed the intersections at 74<sup>th</sup> Avenue and Cedarcrest Street and 74<sup>th</sup> Avenue and Taylors Ferry Road. CTS found that under existing conditions these intersections operate at Level of Service (LOS) B or better. When this project is developed it will generate approximately 278 vehicle trips during an average week day, with 29 trips occurring during the PM peak hours and 22 trips occurring during the AM peak hours. CTS found that with the build out of this site and 2005 traffic conditions that these intersections will continue to operate at LOS B or better.

CTS found that the vehicle trips will slightly increase traffic volumes on surrounding streets, but will have little impact on traffic operations along 74<sup>th</sup> Avenue, including the study intersections.

Based on the findings of the traffic impact report, staff finds that this project will not have a negative impact on the transportation system.

**Public Water System:**

There is an existing TVWD water main in 74<sup>th</sup> Avenue. The applicant will extend a public water main within the proposed streets. The applicant will need to obtain a permit from TVWD prior to construction.

### **Storm Water Quality:**

*The City has agreed to enforce Surface Water Management (SWM) regulations established by Clean Water Services (CWS) Design and Construction Standards (adopted by Resolution and Order No. 00-7) which require the construction of on-site water quality facilities. The facilities shall be designed to remove 65 percent of the phosphorus contained in 100 percent of the storm water runoff generated from newly created impervious surfaces. In addition, a maintenance plan shall be submitted indicating the frequency and method to be used in keeping the facility maintained through the year.*

Prior to construction, the applicant shall submit plans and calculations for a water quality facility that will meet the intent of the CWS Design Standards. In addition, the applicant shall submit a maintenance plan for the facility that must be reviewed and approved by the City prior to construction.

The applicant is proposing to provide a pond that will provide both water quantity and quality for this project. The applicant has indicated that the pond has been designed per CWS standards.

Prior to the City accepting this facility as a public facility, the developer shall maintain it for a minimum of three years after construction is completed. The pond shall be placed in a tract and conveyed to the City on the final plat. The developer will be required to submit annual reports to the City which show what maintenance operations were conducted on the facility for that year. Once the three-year maintenance period is completed, the City will inspect the facility and make note of any problems that have arisen and require them to be resolved before the City will take over maintenance of the facility. In addition, the City will not take over maintenance of the facility unless 80 percent of the landscaping is established and healthy. If at any time during the maintenance period, the landscaping falls below the 80 percent level, the developer shall immediately reinstall all deficient planting at the next appropriate planting opportunity.

### **Grading and Erosion Control:**

**CWS Design and Construction Standards also regulate erosion control to reduce the amount of sediment and other pollutants reaching the public storm and surface water system resulting from development, construction, grading, excavating, clearing, and any other activity which accelerates erosion. Per CWS regulations, the applicant is required to submit an erosion control plan for City review and approval prior to issuance of City permits.**

*The Federal Clean Water Act requires that a National Pollutant Discharge Elimination System (NPDES) erosion control permit be issued for any development that will disturb one or more acre of land. Since this site is over five acres, the developer will be required to obtain an NPDES permit from the City prior to construction. This permit will be issued along with the site and/or building permit.*

A final grading plan shall be submitted showing the existing and proposed contours. The plan shall detail the provisions for surface drainage of all lots, and show that they will be graded to insure that surface drainage is directed to the street or a public storm drainage system approved by the Engineering Department. For situations where the back portions of lots drain away from a street and toward adjacent lots, appropriate private storm drainage lines shall be provided to sufficiently contain and convey runoff from each lot.

A geotechnical report was submitted by GeoPacific Engineering, Inc., dated May 9, 2003. The geotechnical engineer indicates that the proposed development is likely geotechnically feasible provided the geotechnical recommendations in his report are incorporated into the design and construction phases of the project. The recommendations of the report will need to be incorporated into the final grading plan and a final construction supervision report must be filed with the Engineering Department prior to issuance of building permits.

The design engineer shall also indicate, on the grading plan, which lots will have natural slopes between 10% and 20%, as well as lots that will have natural slopes in excess of 20%. This information will be necessary in determining if special grading inspections and/or permits will be necessary when the lots develop.

Since the site is over 1 acre in size an NPDES permit will be required.

### **Address Assignments:**

The City of Tigard is responsible for assigning addresses for parcels within the City of Tigard and within the Urban Service Boundary (USB). An addressing fee in the amount of \$30.00 per address shall be assessed. This fee shall be paid to the City prior to approval of the final plat.

For this project, the addressing fee will be \$900.00 (30 lots and/or tracts X \$30/address = \$900.00).

The developer will also be required to provide signage at the entrance of each shared flag lot driveway or private street that lists the addresses that are served by the given driveway or street. This will assist emergency services personnel to more easily find a particular home.

### **Survey Requirements**

The applicant's final plat shall contain State Plane Coordinates [NAD 83 (91)] on two monuments with a tie to the City's global positioning system (GPS) geodetic control network (GC 22). These monuments shall be on the same line and shall be of the same precision as required for the subdivision plat boundary. Along with the coordinates, the plat shall contain the scale factor to convert ground measurements to grid measurements and the angle from north to grid north. These coordinates can be established by:

- ♦ GPS tie networked to the City's GPS survey.
- ♦ By random traverse using conventional surveying methods.

In addition, the applicant's as-built drawings shall be tied to the GPS network. The applicant's engineer shall provide the City with an electronic file with points for each structure (manholes, catch basins, water valves, hydrants and other water system features) in the development, and their respective X and Y State Plane Coordinates, referenced to NAD 83 (91).

## **SECTION VII. OTHER STAFF COMMENTS**

**The Tigard Building Division** has reviewed this proposal but did not provide any additional comments.

**The City of Tigard Arborist** has reviewed the proposal, and notes that tree protection fencing will be required for the trees to remain.

**The City of Tigard Long Range Planning Division** has reviewed this proposal but did not provide any additional comments.

**The City of Tigard Crime Prevention Officer** has reviewed the proposal and recommended that a monument be placed at the start of the private street identifying house addresses to reduce delays in delivery of emergency services.

RESPONSE: The private street will be named separately from the public street. Houses will be addressed off that private street and, therefore, separate addressing identification (as is typical for flag lots) is not required. The developer may choose to install such signage, however, staff believes that with the separate street name, this signage is unnecessary.

## **SECTION VIII. AGENCY COMMENTS**

**The Tualatin Valley Fire and Rescue** has reviewed the proposal and offered the following comments:

- 1) **FIRE APPARATUS ACCESS ROAD WIDTH AND VERTICAL CLEARANCE:** Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (15 feet for one or two dwelling units and out buildings), and an unobstructed vertical clearance of not less than 13 feet 6 inches. (UFC Sec. 902.2.2.1) Where fire apparatus roadways are less than 28 feet wide, "NO PARKING" signs shall be installed on both sides of the roadway and in turnarounds as needed. Where fire apparatus roadways are more than 28 feet wide but less than 32 feet wide, "NO PARKING" signs shall be installed on one side of the roadway and in turnarounds as needed. Where fire apparatus roadways are 32 feet wide or more, parking is not restricted. (UFC Sec. 902.2.4)

**The private street shall conform to Fire District standards.**

- 2) **NO PARKING SIGNS:** Where fire apparatus roadways are not of sufficient width to accommodate parked vehicles and 20 feet of unobstructed driving surface, "No Parking" signs shall be installed on one or both sides of the roadway and in turnarounds as needed. (UFC Sec. 902.2.4) Signs shall conform to the City of Tigard engineering standards.
- 3) **TURNING RADIUS:** The inside turning radius and outside turning radius shall be not less than 25 feet and 45 feet respectively, measured from the same center point. (UFC Sec. 902.2.2.3)
- 4) **GRADE:** Private fire apparatus access roadway grades shall not exceed an average grade of 10 percent with a maximum grade of 15 percent for lengths of no more than 200 feet. Intersections and turnarounds shall be level (maximum 5%) with the exception of crowning for water run-off. Public streets shall have a maximum grade of 15%. (UFC Sec. 902.2.2.6)
- 5) **SINGLE FAMILY DWELLINGS AND DUPLEXES - FIRE HYDRANTS:** Fire hydrants for single family dwellings, duplexes and sub-divisions, shall be placed at each intersection. Intermediate fire hydrants are required if any portion of a structure exceeds 500 feet from a hydrant at an intersection as measured in an approved manner around the outside of the structure and along approved fire apparatus access roadways. Placement of additional fire hydrants shall be as approved by the Chief. (UFC Sec. 903.4.2.2)
- 6) **FIRE HYDRANT DISTANCE FROM AN ACCESS ROAD:** Fire hydrants shall be located not more than 15 feet from an approved fire apparatus access roadway. (UFC Sec. 903.4.2.4)
- 7) **REFLECTIVE HYDRANT MARKERS:** Fire hydrant locations shall be identified by the installation of reflective markers. The markers shall be blue. They shall be located adjacent and to the side of the centerline of the access road way that the fire hydrant is located on. In case that there is no center line, then assume a centerline, and place the reflectors accordingly. (UFC Sec. 901.4.3)
- 8) **SINGLE FAMILY DWELLINGS - REQUIRED FIRE FLOW:** The minimum available fire flow for single family dwellings and duplexes shall be 1,000 gallons per minute. If the structure(s) is(are) 3,600 square feet or larger, the required fire flow shall be determined according to UFC Appendix Table A-III-A-1. (UFC Appendix III-A, Sec. 5)
- 9) **ACCESS AND FIRE FIGHTING WATER SUPPLY DURING CONSTRUCTION:** Approved fire apparatus access roadways and fire fighting water supplies shall be installed and operational prior to any other construction on the site or subdivision. (UFC Sec. 8704)

**Tualatin Valley Water District** has reviewed the proposal and had no objections to it.

**Clean Water Services** has reviewed the proposal and offered the following comments:

- ♦ Roof drains from all new homes shall be collected in a public storm system and conveyed to a water quality facility for treatment in accordance with R.O. 03-11.
- ♦ Proposed modifications to flood plain elevations may have impact on development.
- ♦ Design must include requirements of Service Provider Letter #2819, issued May 13, 2003.

**The City of Tualatin** has reviewed the proposal and offered the following comments:

The City of Tualatin owns a water main in SW 74<sup>th</sup> Avenue. The proposed grade of the street means that our line will have between 15 and 18 feet of cover. The City would like to request that before construction plans are approved, the developer be required to pot-hole the line to determine the exact location and condition of the pipe. Additionally, the City should be informed 48 hours prior to construction so that a representative from the City can be present when they are impacting our pipe.

**RESPONSE:** This will be required as a condition of approval.

**Washington County, Portland General Electric, Tigard Tualatin School District, NW Natural Gas, Verizon, Comcast Cable, and AT&T Cable** were additionally notified of the proposal but did not respond with formal comments.

PREPARED BY: Morgan Tracy  
Associate Planner

June 30, 2003  
DATE